

٠ 👝	91119065	$\mathbb{Q}^{r_{q^{-1}}}$	RF 1	** **	7. 4.					1541	iradia from	12/13/79.	
	SAMPLE		SFIM.	ИΤ. 4		<b>%</b> -(	COPPER	2	-AN <b>O</b> MONY		V	5ENIC	
	። ነ ግብ እርነው	٦		1					100 mg				a
	0219A 0219B		7086. 8077.		<	0.001			. 54107		0. 3406:		a d
	0219C		7587.		1	0. 00: 0. 00:			. 59457		0. 3581;		
	0219D		6560.			e. ee. 0. 00:			67864 81933		8. 3762:		
	0219E		7012.			0. 00: 0. 00:			. 54413		0. 4141: 0. 3358:		•
_	0219F		6982.		<	0. 00: 0. 00:			. 64086		0. 3562:		
, 🖷	0219G		8826.		-	0. 00:			L 81.724		9. 4024:		
i	0219H		7162.	999	<	0. 00:			L. 78046		0. 3997:		
_	02191		7652.			0. 997	252	1	l. 78221		0. 3970:		_
•	05121		6574.			0. 00°		1	L 76917		0. 4149;	2 .	
	Q219K		7439.			0. 99			L. 64163		0. 3761)		
	0219L 0219M		7719.			9. 99:			L. 78589		0. 4110;		
•	0219N		8012. 7665.		,	9. 99			L. 90461		Ø. 4449:		
	02190		8901.		<	0. 00: 0. 00:			L. 57969 L. 81542		9. 3544I		
~~	Q219P		7884.			0. 99: 9. 99:			L 61942 L 65024		9. 4957; 9. 3696;		
-	02190		8199.			0. ee. 9. 99:			L. 59695		0.3691;		<del></del>
	Q219R		6988.		<	0. 00:			65282		9. 3766 9. 3766		
	02195		6663.		**	Ø. ØØ:			L. 52336		0. 3508		
	Q219T		7018.	888	<	0. 00:	204		L. 57433	•	Ø. 3621		
	)						438 AVG		68463 AV		Ø. 38Ø3		
							2116 SD		). 11.4401 S		0. 0293		
	ì					48. 33	7547 %RSD	E	5. 790895 %	RSD	7. 7032	62 %RSD	•
	0220A		7119.	999		0. 01:	111	ø	ð. 81837		Ø. 2279	7	
•	02208		9067.			0. 01:			3. 69431		0. 1981		
	Q220C		7711.	000		0. 01			ð. 6 <i>0</i> 629		0. 1712		
-	02200		5821.			0. 01:		E	3.,59921		9. 1747	9	_
	0220E		10054.			9. 91;			3. 69452		0. 2069:	9	•
	0220F		6439.		<	9. 99			5. 27403 🥣		1. 4476		,
	0220G 10220H		7362.			0. 01.			3. 75657		Ø. 21.79		
-	0220I		9903. 7253.			0. 01: 0. 00:			0.66991		0. 1816		
	0220j		7705.			9. 99: 9. 91:			3. 63480 3. 67520		0. 1828 0. 1930		
•	0220K		7043.			0. 02°			o. oruze 5. 50303√		0. 1930 1. 6153		
	Q220L		6656.			9. 91:			9. 70875		9. <u>1812</u>		
_	Q220M		7881.	. 999		0. 01:			a. 70096		0. 2068		
	0220N		6979.			0.01	347	1	L. 00578		ø. 2856		
	02200		8125.			0. 01.:			3. 60094		0. 1754	2	
	0220P 02200		899 <i>6</i> .			0. 02:			5. 16905		1. 5590		_
-	, MSSAM 0550K		8327. 7967.			9. 91: 9. 94:			3.84879 3.77504		0. 2461		•
	02205		7967. 8139.			0. 01: 0. 01:			0. 73581 0. 71750	•	0. 2044 0. 4000		_
	Q220T		11369			0. 01			9. 66456	`	0. 1980 0. 1901		•
						0. 01	298 AVG	1	L. 40392 AV	'G	0. 4032	4 AVG	_
4	•						4720 SD	1	l. 689342 S	SD.	0. 4917		•
						36. 35	1048 %RSD	120	0.330452 %	RSD	121. 9479	29 %RSD	) 
	) 0221A		1.4729.			0. 01	R14	,	4. 55122 /		1. 3494	a	•
_	0221B		9445			9. 91			t. 95122 / 1. 06708		1. 34 <i>5</i> 4 0. 3019		
	0221C		9836.			0. 01			a. 63592		0. 3019 0. 1759		
	Q221D		11009			0. 01			a. 62888		Ø. 1654		
_	0221E		1.1477.			0. 01			1. 70990		0. 4832		_
4	0221F		11403			0. 01			1. 08977		9. 3179		4
	0221G		11900			9. 91			a. 63279		0. 1792		
	0221H 0221.I		11984. 14558.			9. 99 9. 94			0. 67673 1. 43576		0. 1921		
	0221.I 0221.I		14008. 12918			0. 01 <u>0_0</u> 1			l. 13576 a <u>. 60596</u>		0.3223 0.4709		

Q221K Q221L Q221N; Q221N; Q221O Q221F Q221Q Q221R Q221S Q221T	12496.000 14801.000 9552.000 9932.000 15000.000 9436.000 11910.000 9925.000 12933.000	0.01267 0.01013 0.01010 0.01008 0.01362 0.01128 0.01283 0.01318 0.01326 0.01326 0.01326	9. 73889 9. 56575 9. 66237 9. 66237 9. 68364 9. 68321 9. 93357 9. 61889 9. 65966 9. 97579 AVG 9. 886389 SD 90. 837997 %RSD	0. 20099 0. 15503 0. 17968 0. 19205 0. 16960 0. 18347 0. 19892 0. 26373 0. 17948 0. 17781 0. 27792 AVG 0. 264651 SD 95. 224907 %RSD
● S626A S626B S626C ●	17425. 000 17553. 000 13948. 000	0.07890 0.07540 0.08013 0.07815 RVG 0.002452 SD 3.138153 %RSD	0. 71258 0. 70899 0. 74289 0. 72149 AVG 0. 018624 SD 2. 581.390 %RSD	0.00597 0.00477 0.00494 0.00522 RVG 0.000649 SD 12.428221 %RSD
• \$604A \$604B \$604C	15259. 000 13012. 000 11960. 000	0.00656 0.00648 0.00655 AVG 0.00068 SD 1.038023 %RSD	1. 66748 1. 61165 1. 76824 1. 68246 AVG 0. 079363 SD 4. 717062 %RSD	0.09751 0.09704 0.10718 0.10057 AVG 0.005722 SD 5.689143 %RSD

1 6 (TI)TITLE: 91119065 QY RF (LN)LIBRARY: (SA)SAMPLE TIME: 13DEC79 1128:00 (SE)STD ENERGY TOLERANCE: 2.00 (UE)UNK ENERGY TOLERANCE: 2.00 (TF)THERMAL FLUX: 0.0000E-01 (EF)EPITHERMAL FLUX: 0.0000E-01 (FF)FAST FLUX: 0.0000E-01 (QU)UNITS: ELEMENT **ENERGY** HALF-LIFE SEC 1 %-COPPER 511. 00 1.2800E 01 H 4.6080E 04 Z-ANTIMONY 564. 09 2.7200E 00 D 2.3501E 05 %-ARSENIC 657.41 2.6300E 01. H 9.4680E 04 STANDARD SAMPLES NAME MASS FILE POWER FICT TIME 5626FI 17425.00 FBI1 . A01 100.0 100000.0 S626B 17553.00 FBI1 . A02 100.0 100000.0 S626C 13948.00 FBI1 . A03 100.0 100000.0 S604A . FIØ4 15259.00 FB11 100.0 100000.0 5 S604B 13012.00 FBI1 . AØ5 100.0 100000.0 5604C 11960.00 FBI1. . AØ6 100.0 100000.0 STD: 1 S626A FILE= FBI1 . R01 ELEMENT ENERGY CONC ERROR %--COPPER 511.00 7. 8000E-02 0. 0000E-01 Y-ANTIMONY 7. 2000E-01 0. 0000E-01 564. 09 X-ARSENIC 657.41 0.0000E-01 0.0000E-01. STD: 2 S626B F1LE= FB11 . A02 ELEMENT ENERGY CONC ERROR %-COPPER 511. 00 7.8000E-02 0.0000E-01 2-FINT I MONY 564. 09 7. 2000E-01 0. 0000E-01 %-ARSENIC 657.41 0.0000E-01 0.0000E-01 STD: 3 S626C FILE= FBI1 . A03 ELEMENT ENERGY COMC ERROR %-COPPER 511.00 7.8000E-02 0.0000E-01 %-ANTIMONY 564. 09 7. 2000E-01 0. 0000E-01 657. 41. W--ARSENIC 0.0000E-01 0.0000E-01 STD: 5604FI FILE= FBI1 . A04

STD: 5 S6048 FILE= FRI1 .A05

ENERGY

511.. 00

564. 09

657. 41.

ELEMENT

Z-ANTIMONY

**%-ARSENIC** 

%-COPPER

1

CONC

ERROR

0.0000E-01 0.0000E-01

0.0000E-01 0.0000E-01

1.0000E-01 0.0000E-01

1 2-COPPER 51. 00 0.0000H-01 0.00	ELEMENT	ENERGY CONC ERROR	
STD: 6	1 %-COPPER	511.00 0.000E-01 0.0000E-01	•
STD: 6			
ELEMENT   ENERGY   CONC   ERROR   1 X-COPPER   511.00   0. 0000E-01   0. 000E-01   0. 00E-01   0.	• > VLUKECUIC	607.4I 1.0000E-01 0.0000E-01.	•
ELEMENT   ENERGY   CONC   ERROR   1 X-COPPER   511.00   0. 0000E-01   0. 000E-01   0. 00E-01   0.			_
1 X-COPPER 511. 80 8. 8000E-81 8. 8000E-81 2 Z-RRSENIC 557. 41 1. 8000E-81 8. 800E-81	STD: 6 S604C	FILE= FBI1 .806	
1 X-COPPER 511. 80 8. 8000E-81 8. 8000E-81 2 Z-RRSENIC 557. 41 1. 8000E-81 8. 800E-81	ELEMENT	FNFRGY CONC EPPOP	
UNKNOWN SAMPLES    NAME	_ 1 %COPPER	511. 00   0. 0000F-01  0. 0000F-01	
NAME	2 %-ANTIMONY	564.09 0.0000E-01.0.0000E-01	•
NAME   MRSS   FILE   POWER   ACT   TIME	s w-HKDEMIC	657.41 1.0000E-01.0.0000E-01.	·
NAME   MRSS   FILE   POWER   ACT   TIME	•		•
1 92198		UNKNOWN SAMPLES	
2 02198			•
3 0219C			
Q219D			•
S   C215F   F012. 60 FBI1   A11   100.0   100000.0	4 Q219D		_
C219G		7012.00 FBI1A11. 100.0 100000.0	_
8 0219H 715C 200 FBI1 A14 100.0 1000000.0 0 1000000.0 1 1000000.0 1 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 1000000.0 0 11 0219K 7439.00 FBI1 A15 100.0 1000000.0 0 1000000.0 0 12 0219L 7719.00 FBI1 A18 100.0 1000000.0 0 1000000.0 0 12 0219M 8011.2 00 FBI1 A18 100.0 1000000.0 0 10000000.0 0 10000000.0 0 10000000.0 0 10000000.0 0 1000			•
9 92191 7652 89 FB14			
10			•
12 0219L 7719 08 FB11 R18 100 0 100000 0 100000 0 14 0219N 7665 00 FB11 R12 100 0 100000 0 100000 0 16 0219P 7884 00 FB11 R22 100 0 100000 0 100000 0 16 0219P 7884 00 FB11 R22 100 0 100000 0 100000 0 17 0219Q 0 199 00 FB11 R22 100 0 100000 0 100000 0 100000 0 17 0219Q 0 199 00 FB11 R22 100 0 1000000			•
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16 Q219P 7884, 89 FB11 . R22 109. 8 199090. 8 199090. 8 1199 . 80 FB11 . R23 109. 8 1990900. 8 1990900. 8 1990900. 8 1990900. 8 1990900. 8 1990900. 8 1990900. 8 19909000. 8 1990900. 8 1990900. 8 1990900. 8 1990900. 8			•
18 Q219R 6988. 00 FB11 . R24 100. 0 100000. 0 19 Q2195 6663. 00 FB11 . R65 100. 0 100000. 0 20 Q219T 7018. 00 FB11 . R25 100. 0 100000. 0 20 Q219T 7019. 00 FB11 . R25 100. 0 100000. 0 20 Q220B 9067. 00 FB11 . R27 100. 0 100000. 0 20 Q220B 9067. 00 FB11 . R27 100. 0 100000. 0 20 Q220B 9067. 00 FB11 . R29 100. 0 100000. 0 20 Q220B 9067. 00 FB11 . R29 100. 0 100000. 0 20 Q220B 10054. 00 FB11 . R30 100. 0 100000. 0 20 Q220B 10054. 00 FB11 . R30 100. 0 100000. 0 20 Q220B 10054. 00 FB11 . R31 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R31 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R32 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R33 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R35 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R35 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R35 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R35 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R35 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R35 100. 0 100000. 0 20 Q220B 9093. 00 FB11 . R36 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R36 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R36 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R39 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R39 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R44 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000. 0 9 Q220B 9093. 00 FB11 . R45 100. 0 100000.	16 Q219P		•••
19 92195 6663 00 FBI1		8199.00 FBI1 .A23 100.0 100000.0	
28			•
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22 0220B 9067. 00 FB11 . A27 190. 0 190000.0 23 0220C 7711. 00 FB11 . A28 100. 0 100000.0 24 0220D 5821. 00 FB11 . A39 100. 0 100000.0 25 0220F 10054. 00 FB11 . A30 100. 0 100000.0 26 0220F 6439. 00 FB11 . A31 100. 0 100000.0 27 0220G 7362. 00 FB11 . A32 100. 0 100000.0 28 0220H 9903. 00 FB11 . A32 100. 0 100000.0 29 0220I 7253. 00 FB11 . A34 100. 0 100000.0 30 0220J 7705. 00 FB11 . A34 100. 0 100000.0 31 0220K 7043. 00 FB11 . A35 100. 0 100000.0 32 0220L 6656. 00 FB11 . A36 100. 0 100000.0 33 0220M 7881. 00 FB11 . A37 100. 0 100000.0 33 0220M 7881. 00 FB11 . A38 100. 0 100000.0 34 0220N 6979. 00 FB11 . A38 100. 0 100000.0 35 0220N 6979. 00 FB11 . A39 100. 0 100000.0 36 0220P 8996. 00 FB11 . A65 100. 0 100000.0 37 0220Q 8327. 00 FB11 . A44 100. 0 100000.0 38 0220R 7967. 00 FB11 . A44 100. 0 100000.0 39 0220T 11369.00 FB11 . A44 100. 0 100000.0 40 0220T 11369.00 FB11 . A44 100. 0 100000.0 41 0221B 9445. 00 FB11 . A45 100. 0 100000.0 42 0221B 9445. 00 FB11 . A46 100. 0 100000.0 45 0221E 11477. 00 FB11 . A49 100. 0 100000.0 46 0221F 11493. 00 FB11 . A49 100. 0 100000.0 47 0221G 11493. 00 FB11 . A99 100. 0 100000.0 48 0221H 11900.00 FB11 . A99 100. 0 100000.0			•
23	22 02208		
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26 Q220F			•
27 9220G			
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30 Q220J 7705.00 FBI1 .A35 100.0 100000.0 31 Q220K 7043.00 FBI1 .A36 100.0 100000.0 32 Q220L 6656.00 FBI1 .A37 100.0 100000.0 33 Q220M 7881.00 FBI1 .A38 100.0 100000.0 34 Q220N 6979.00 FBI1 .A39 100.0 100000.0 35 Q220C 8125.00 FBI1 .A65 100.0 100000.0 36 Q220P 8996.00 FBI1 .A40 100.0 100000.0 37 Q220Q 8327.00 FBI1 .A41 100.0 100000.0 38 Q220R 7967.00 FBI1 .A41 100.0 100000.0 39 Q220S 8139.00 FBI1 .A42 100.0 100000.0 40 Q220T 11369.00 FBI1 .A44 100.0 100000.0 41 Q221A 14729.00 FBI1 .A44 100.0 100000.0 42 Q221B 9445.00 FBI1 .A45 100.0 100000.0 43 Q221C 9836.00 FBI1 .A46 100.0 100000.0 44 Q221C 9836.00 FBI1 .A47 100.0 100000.0 45 Q221E 11477.00 FBI1 .A48 100.0 100000.0 46 Q221F 11403.00 FBI1 .A49 100.0 100000.0 47 Q221G 11900.00 FBI1 .A59 100.0 100000.0 48 Q221H 11984.00 FBI1 .A51 100.0 100000.0	28 Q220H		
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41 Q221A 14729.00 FBI1 . A45 100.0 100000.0  42 Q221B 9445.00 FBI1 . A46 100.0 100000.0  43 Q221C 9836.00 FBI1 . A47 100.0 100000.0  44 Q221D 11009.00 FBI1 . A48 100.0 100000.0  45 Q221E 11477.00 FBI1 . A49 100.0 100000.0  46 Q221F 11403.00 FBI1 . A50 100.0 100000.0  47 Q221G 11900.00 FBI1 . A51 100.0 100000.0  48 Q221H 11984.00 FBI1 . A52 100.0 100000.0	. 🛡 39 02205	8139.00 FBI1 .A43 100.0 100000.0	•
<ul> <li>42 Q221B</li> <li>9445.00 FBI1. A46</li> <li>100.0 100000.0</li> <li>43 Q221C</li> <li>9836.00 FBI1. A47</li> <li>100.0 100000.0</li> <li>44 Q221D</li> <li>11009.00 FBI1. A48</li> <li>100.0 100000.0</li> <li>45 Q221E</li> <li>11477.00 FBI1. A49</li> <li>100.0 100000.0</li> <li>46 Q221F</li> <li>11403.00 FBI1. A50</li> <li>100.0 100000.0</li> <li>47 Q221G</li> <li>11900.00 FBI1. A51</li> <li>100.0 100000.0</li> <li>48 Q221H</li> <li>11984.00 FBI1. A52</li> <li>100.0 100000.0</li> </ul>			
43 Q221C 9836.00 FBI1 . A47 100.0 100000.0 44 Q221D 11009.00 FBI1 . A48 100.0 100000.0 45 Q221E 11477.00 FBI1 . A49 100.0 100000.0 46 Q221F 11403.00 FBI1 . A50 100.0 100000.0 47 Q221G 11900.00 FBI1 . A51 100.0 100000.0 48 Q221H 11984.00 FBI1 . A52 100.0 100000.0			
44 Q221D 11009.00 FB11 . A48 100.0 100000.0  45 Q221E 11477.00 FB11 . A49 100.0 100000.0  46 Q221F 11403.00 FB11 . A50 100.0 100000.0  47 Q221G 11900.00 FB11 . A51 100.0 100000.0  48 Q221H 11984.00 FB11 . A52 100.0 100000.0			
46 Q221F 11.403.00 FBI1 . A50 100.0 100000.0 47 Q221G 11900.00 FBI1 . A51 1.00.0 1.00000.0 48 Q221H 11984.00 FBI1 . A52 100.0 100000.0	_ 44 0221D	11009.00 FBI1 .A48 100.0 100000.0	_
47 Q221G 11900.00 FBI1 .A51 100.0 100000.0 48 Q221H 11984.00 FBI1 .A52 100.0 100000.0			•
● 48 Q221H 11984.00 FBI1 A52 100.0 100000.0			
		14558 00 FRI1 R53 100 0 100000 0	

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50	Q221J	12918.00		. R54	100.0	1.000000.	Ø
<b>51</b>	Q221K	12 <u>4</u> 96. 00		. A55	100.0	<u>1</u> ,00000.	Ø
52	0221.L	1 1. 00	FBI1	. ศรธ	100.0	H0000.	ଥ
<b>5</b> 3	0221M <sup>,</sup>	9552.00	FEI1	. ค57	100.0 *	100000.	0
<b>5</b> 4	Q221N	9932. 00	FB11	. A58	100.0	1.00000.	0
55	Q221O	15000.00	FBI1	. A59	100. 0	100000.	Ø
_ 56	0221P	9436. 00		. R60	100.0	1.000000.	
<b>●</b> ₂ 57	02210	11910.00		. A61	100.0	100000.	
58	Q221R ·	9925. 00		. A62	100.0	100000.	
_ 59	Q2215	12933.00		. A63	100.0	100000.	
<b>9</b> 69	0,2217	10789. 00		. R64	100.0	100000.	
61	5626A	17425. 00		. FIØ1	100.0	100000.	
_ 62	5626B	17553.00		. A02	100.0	100000.	
<b>6</b> 3	5626C	13948.00		. A03	100.0	1000000.	
64	S604A	1.5259. 00		. 1163 . 1164	1.00. 0		
65	5604B	13012.00		. 1184 . 1185	100.0	1.00000.	
<b>6</b> 6	5604C	11960.00				100000.	***
	20040	11300. 00	LDIY	. A06	100. 0	100000.	ម
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ઋજેલ્લાએ એક્સર્જન્મ લેવામાં આવેલા જાણકાર છે. -14 DEC 1979 9:25:56 AM \*\*\*\*\*\*\*\* \* \*\*\*\*\* 91119065 QY RF SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 5626A TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 1.7425.00 UNITS: SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TRB1. 

:4:

:4:

:k

ACQUISITION DATE: 14DEC79 208:28 \* FWHM(1332) 2.390PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699: SEC \* MBR ITERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

ENERGY WINDOW 499, 787 TO 674, 920

PK IT EMERGY AREA BKGMD FWHM CHANNEL LEFT PW CTS/SEC **XERR** FIT 1 1 511. 10 13742. 4338. 3. 10 1022.60 1011 37 2.290E 01 1.1 3.06E 00 2 1 564. 22 89943. 3231. 2. 27 1128.77 1.1.20 18 1.499E 02 0.3 6.84E 3 1 602.85 2645. 630. 2.20 1205.97 1197 26 4.409E 00 2.4 1.06E 4 1 646. 01. 208. 284. 2.10 1292, 22 1,286 18 3.466E-01 13.4 1.47E 00 5 1 657.30 127. 162. 2.61 12 2.122E-01 16.7 1.05E 1314.78 1309

PERK SERRCH COMPLETED

#### STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
M. R J. St. J. St. Str., Street, Street, Street,				(1. SIGMA)		(1 SIGMA)
%-COPPER	51.1. 0	1.3742.	7.8000E-02	0. 0000E01.	3. 7470E-02	4. 0825E-04
● %-ANTIMON		89943.	7. 2000E-01	0. 0000E-01	1. 3975E-02	4. 8244E-05
%-ARSENIC	657. 4	9.	0.0000E-01	0. 0000E-01	0.0000E-01.	0.0000E-01

\* 14 DEC 1979 9:27:04 AM 91119065 QY RF SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S626B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 17553.00 UNITS: SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TRB1 ACQUISITION DATE: 14DEC79

SEC

SEC

SEC

BKGND

3704.

3245.

441.

302.

149.

600.

613.

600.

0.5003803

-0.5932283 KEV

ENERGY WINDOW

AREA

13106.

89981.

2929.

216.

102.

218:54 \* FWHM(1332)

ж

260CT79 1434:06 \* ENERGY TOLERANCE:

ж

499. 787 TO

FWHM

3.04

2.28

2.39

2.42

2.65

\* SENSITIVITY:

\* NER ITERATIONS:

\* LIBRARY: NUCL. LIB1

\* HALF LIFE RATIO:

\* ABUNDANCE LIMIT:

\* SHAPE PARAMETER : 15.0 %

674. 920

CHANNEL LEFT PW

1022.63 1011

1128.79 1121

1206.07 1196

1291.89 1284

1314. 58 1311.

2, 390

4.000

2. 000KV

CTS/SEC

32 2.184E 01

18 1.500E 02

18 4.881E 00

ZERR

17 3.597E-01 13.3 1.49E 00

11 1.700E-01 19.6 1.93E @

FIT

1.1 3.83E 00

0.3 8.06E

2. 1 1. 99E

8. 00

85. 00%

10.

PEAK SEARCH COMPLETED

ENERGY

511.11

564.23

602.90

645.84

657, 20

STANDARD REPORT:

PRESET TIME(L1VE):

ELAPSED REAL TIME:

ELAPSED LIVE TIME:

DETECTOR: GELI-8

DATE CALIBRATED:

KEY/CHNL:

OFFSET:

PK IT

1

1

1

1

1

1

3

5

• ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
%-COPPER •%-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 4	89981.	7.8000E-02 7.2000E-01 0.0000E-01	0. 0000E-01	1. 3905E02	4. 7996E-05

\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:28:11 AM 3645464646464646464646464646464646 \* 1:4:4:4:4:4:4:4:4: 91119065 QY RF SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S6260 TYPE OF SAMPLE: STANDARD SRMPLE QUANTITY: 13948, 00 UNITS: SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TRB1 ACQUISITION DATE: 14DEC79 229:21 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC SENSITIVITY: 4.000 ELAPSED REAL TIME: 61.0. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :4: ж. DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% ENERGY WINDOW 499, 787 TO 674.920 PK IT ENERGY HREA BKGND FWHM CHANNEL LEFT PW CTS/SEC **ZERR** FIT

1 1 511.. 11 10964. 2184. 3.96 1022.62 1011 24 1. 827E 01 1.1 3.25E 00 9 2 559.81 1102. 377. 1.34 1119.96 11.08 36 1.837E 00 3. 9 4. 04E 3 9 564.23 74782. 463. 2.30 1128.79 1108 36 1.246E 02 0.4 1 602. 92 2217. 1.240. 2, 22 1206.11 1194 57 3.696E 00 3.1 3.70E 00 1 657, 38 84. 145. 2.04 1314.95 1311 1.0 1.393E-01 23.1 3.96E

PEAK SEARCH COMPLETED

#### STANDARD REPORT:

ELEMENT ENERGY AREA CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.0 1.0964. 7.8000E-02 0.0000E-01 3.8055E-02 4.2979E-04 %-ANTIMONY 564.1 74782. 7. 2000E-01 0. 0000E-01 1. 4570E-02 5. 3607E-05 %-ARSENIC 657.4 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:29:16 AM \*\*\*\*\*\*\*\* 91119065 QY RF SAMPLE DATE: 1.3DEC79 1128:00 SAMPLE IDENTIFICATION: S604FI TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 15259.00 UNITS: SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAB1 :4: ACQUISITION DATE: 14DEC79 239:43 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :40 DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99% 

ENERGY WINDOW 499.787 TO 674.920

PK IT ENERGY FIREA **BKGND** FWHM CHANNEL LEFT PW CTS/SEC **ZERR** FIT 1. 1 511.02 972. 3480. 3. 19 1022, 45 1014 16 1.620E 90 9. 2 9. 70E-01. 2 2 559, 27 17723. 1.941. 2.39 1118.88 1108 35 2.954E 01 0.8 3.86E 01 3 2 564. 19 183289. 2.30 1356. 1.1.28. 70 1.108 35 3.055E 02 0.2 4 1 602.87 5604. 1022. 2, 28 1206.02 1198 18 9.340E 00 1. 6 8. 56E-01. 5 1 645. 91. 430. 765. 2.40 1292.02 1284 18 7.163E-01 10.3 1.77E 00 1 657, 26 1797. 778. 2.20 1.31.4. 71. 1.307 17 2.995E 00 3. 2 9. 21E-

PEAK SEARCH COMPLETED

#### STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
				(1 SIGMR)		(1 SIGMA)
●%-COPPER	511.0	Ø.	0. 0000E:-01	0. 0000E-01.	0. 0000E-01	9. 0000E-01
%-ANTIMONY	564. 1	Ø.	0. 0000E-01.	0. 0000E-01.	0.0000E-01	0. 0000E-01
_ %-ARSENIC	657. 4	1797.	1. 0000E-01	0. 0000E-01	2. 9359E-03	9. 4599E-05

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:30:20 AM \*\*\*\*\*\* \* Herberterberberberberte 91119065 QY RF SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S604B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 13012.00 UNITS: SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAB1. ACQUISITION DATE: 14DEC79 250:22 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0. :1:

DETECTOR: GELI-8 \* L

DATE CALIBRATED: 260CT79 1434:06 KEV/CHNL: 0.5003803

OFFSET: -0.5932283 KEV

\* LIBRARY: NUCL. LIB1 \* ENERGY TOLERANCE:

\* HALF LIFE RATIO: 8.00 \* ABUNDANCE LIMIT: 85.00%

2. 000KV

: ncompnace Finit: 83.80

ENERGY WINDOW 499, 787 TO 674, 920

PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC **XERR** FIT 1 1 51.0.95 828. 2576. 2.99 1.022, 31 1017 14 1.381E 00 9.3 1.39E 00 2 2 559, 25 15242. 2.49 33 2.540E 01 1.484. 1118.84 11.07 0.9 4.18E @1 3 2 564, 19 2.29 150782. 1011. 33 2.513E 02 1128.71.1107 0.3 1 692.86 4538. 820. 2, 25 1205.98 1199 17 7.563E 00 1.7 9.59E-01 5 1 645.95 407. 556. 3.16 1292.09 1283 19 6.781E-01. 9.6 1.45E 020 1 657.24 1518. 595. 2.36 1314.67 1305 20 2.530E 00 3.4 6.06E-0

PERK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY RREA CONCENTR. ERROR CONSTRNT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511. 0 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 X-ANTIMONY 564.1 0.0000E-01.0.0000E-01.0.0000E-01.0.0000E-01 Ø. %-ARSENIC 657.4 151.8. 1.0000E-01 0.0000E-01.2.9219E-03 1.0017E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:31:28 AM 4040404040404040404040404040404 91119065 QY RF SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S694C TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 11960,00 UNITS: SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 :4: ACQUISITION DATE: 14DEC79 300:57 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC :4: SENSITIVITY: 4.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10. sic. DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. ØØØKV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4: ENERGY WINDOW 499. 787 TO 674. 920 PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC **MERR** 

FIT 1 1 510.89 739. 2758. 3.03 1022.18 1016 14 1.231E 00 10.7 1.22E 00 2 2 559, 27 2.48 15319. 1539. 1118.87 1107 36 2.553E 01. 0.9 3.36E 3 2 564.19 151773. 1.039. 2.28 11.28. 71 11.07 36 2.530E 02 Ø. 3 4 1 602, 86 4682. 2.35 1360. 1206.00 1195 32 7.804E 00 1.8 2.98E 00 5 1 645.96 425. 522. 2.63 18 7.076E-01 1.292. 13 1283 9.·0 1.41E 1 657, 24 1534. 2.37 646. 1314.66 1308 19 2.556E 00 3. 5 2. 07E 1 665.64 **13**6. 343. 2.56 1331, 46 1327 10 2.266E-01 21,1 2.23E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY AREA CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511. 0 0. 0.0000E-01.0.0000E-01 0.0000E-01 0.0000E-01 2-ANTIMOMY 564.1 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 톄. **%-ARSENIC** 657.4 1534. 1.0000E-01 0.0000E-01 3.2271E-03 1.1184E-04

## SUMMARY OF STANDARD CONSTANTS:

.4	tent tent tent total	W 1 .011.011.017.017.017.017.017.017				
3	ELEMENI	%-COPPER	AT	511.	00	KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
5626A	7. 8000E-02	3. 7470E-02	(1 SIGMA) 4.0825E-04
5626B 5626C	7. 8000E-02 7. 8000E-02	3. 5810E-02 3. 8055E-02	3. 9134E-04 4. 2979E-04
MEAN CONSTANT,	 3 STDS:	 3. 7043E-02	2. 3608E-04

# 2. ELEMENT %-ANTIMONY RT 564.09 KEY

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
S626A	7. 2000E-01	1. 3975E-02	(1 SIGMA) 4.8244E-05
5626B 5626C	7. 2000E-01 7. 2000E-01	1. 3905E-02 1. 4570E-02	4. 7996E-05 5. 3607E-05
MEAN CONSTANT,	3 STDS:	1. 4121E-02	2 8727F-:05

## 3. ELEMENT %-ARSENIC AT 657, 41 KEV

STANDARD NAME	CONCENTR.	CONSTRNT	ERROR
5604A 5604B 5604C	1. 0000E-01 1. 0000E-01 1. 0000E-01	2. 9359E-03 2. 9219E-03 3. 2271E-03	(1 SIGMA) 9.4599E-05 1.0017E-04 1.1184E-04
MEAN CONSTANT,	3 STDS:	3. 0110E-03	5. 8586E-05

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:33:00 AM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

<sup>1</sup>91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7086, 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 13DEC79 1537:36 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

657.06

665, 67

4004.

297.

624.

449.

ELEMENT	PEAK ENERGY	BKGNI	) 	PREA	CONCE	VTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMOMY %-ARSENIC	564. 1.	221: 116: 60:	3. 8	465. 8442. 3899.	1. 541		0. 0061	15. 1 0. 4 2. 7
• 1009: 163 1018: 153 1027: 153	l 182.	129. 173. 143.	200.	129. 219. 130.	215.	136. 198. 122.	177.	159.
1117: 5479 1126: 8614 1135: 94	<del>1. 13996.</del>	661.5. 1.7079. : 82.	1.6599.	3543. 13379. 71.	8248.	3545.	1445. 949. 70.	
	4. 40. L. 245. 1. 38. PULSE-PIL	435. 38.	644. 23.	794. 33.	748. 25.	555. 31.	362. · 40.	194.
PK IT EN			KGND				PW CTS/	SEC %ERR
2 2 559 3 2 564 • 4 1 603		725. 732. : 193. ;	819.	2. 38	1022. 10 1118. 54 1128. 45 1205. 77	1.109 1.109 1.196	32 5. 921 32 1. 514 22 4. 156	E 02 0.3 E 00 2.6
5 1 64	5. 70 2	101.	321	2. 02	1291. 60	1.287	10 3.346	E-01. 14. 7

2.43

3.04

1314. 31 1305

1331. 52 1324

19 6.674E 00 1.8

1.4 4.947E-01 11.8

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02198

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8077.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 13DEC79 1548:06 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### \_UNKMOWN SAMPLE REPORT

665, 17

426.

473.

ELEMENT	PEAK ENERGY	BKGN	ID I	FIREA	CONCE		1 SIGMA ERROR	ZER	ROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	115	8. 10	41.1.6.	1. 594	16	NOT DET 0. 0060 0. 0092		0.4
• 1009: 183. 1018: 193. 1027: 186.	221.	166. 230. 157.	210.	216.		227.		177.	
1117: 6478. 1126:10298. 1135: 91.	16341	19880.	19712.	15677.	9765.	4092.			
1319: 82.	264.	529. 36.	766. 48.	894. 29.	909. 40.	688. 38.	444. 37.	59. 207. 35.	
PK IT ENER			KGND	<b>Г</b> ЫНМ			W CTS/	SEC	%ERR
<ul> <li>1 2 559.</li> <li>2 2 564.</li> <li>3 1 602.</li> <li>4 1 645.</li> <li>5 1 657.</li> </ul>	06 1074 77 29 73 2	66. 09. 11.	1568. 1195. 878. 850. 686.	2. 91	1118.56 1128.45 1205.82 1291.67	1107 1197 1285	33 7. 243 33 1. 791 19 4. 849 18 3. 513	E 02 E 00 E-01 2	0.5 0.3 2.4 1.1
w a Out.	50 YO	الله الله الله الله الله الله الله الله	oop.	2. 44	1314. 35	1780	19 8.002	E 66	1.7

3.96

1330.52 1324

14 7.100E-01

\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:35:17 FIM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219C

TYPE OF SAMPLE: UNKMOUN

SAMPLE QUANTITY: 7587.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 1558:37 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 618. SEC. \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL1-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEY/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* RBUNDANCE LIMIT: 85. 00%

\* LIBRARY: NUCL, L181

2. 000KV

#### UNKNOWN SAMPLE REPORT

1

1.

657. 06

665.46

4709.

352.

736.

515.

● ELEM	ENT	ad		PEAK VERGY	BK0	3ND	F	REA	CONCE	NTR.	1 SIGMA ERROR	. %ER	ROR
● X-AN	rit	R IONY IIC		564. 1	11	L32.	103	732. 2765. 1569.	1 67		0. 0006 0. 0063 0. 0097	1	0. 3 0. 4 2. 6
• 100 101 102	8:			160. 193. 165.	164. 209. 155.		1	154. 270. 153.	230.	1.65. 221. 174.	237.	195.	
_ 112	:6:	6323. 9983. 107.	16	7790. 5321. 96.	7818. 19779. 70.	1928	2.	4160. 15513. 67.		1188. 4163. 76.	1238.	4461 289. 103.	
<ul><li>130</li><li>131</li><li>131</li></ul>	Ø:	1.28. 76.		275. 37.	535. 27.	75 3	6. 0.	868. 24.		650. 37.			
● PK	IT	ENER			REA	BKGND		FWHM	CHANNEL			'SEC	%ERR
<ul><li>1</li><li>2</li><li>3</li><li>4</li></ul>	1 2 2 1	510. 559. 564.	10 06	42 1.05	357. 895.	2562 1495 1167	ì.	3. 96 2. 44 2. 39	1.022. 20 111.8. 54 1128. 45	1107 1.107	15 1. 258 34 7. 059 34 1. 765	PE 01 SE 02	0. 5 0. 3
5	1.	571. 602.			128. 890.	682 835		2. 12 2. 43	1142.99 1205.66		9 2.133 20 4 816		0.6 9.4

2.46

2.42

1314.30 1302

1331.09 1323

21 7.848E 00

1.6 5.864E-01 10.7

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:36:28 AM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6569, 999

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

UNITS:

ACQUISITION DATE: 13DEC79 1609:07 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

DATE CALIBRATED:

KEY/CHNL:

OFFSET:

0.5003803

-0.5932283 KEV

\* LIBRARY: NUCL. L.IB1 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV \* HALF LIFE RATIO: 8. 00 \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

3

1

657. 03

665, 20

4453.

285.

274.

580.

ELEMENT	PEAK ^ENERGY	BKGN	D f	REA	CONCEN	NTR.	1 SIGMR ERROR	%ERROR	
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1	115	Ø. 90	5123.	1.815	93	0. 0070	11. 8 0. 4 2. 5	
	1.45. 1.96. 1.61	207.	268.	251.	226.	211.	187. 197. 1.45.	188.	
1117: 6162 1126: 9416. 1135: 109.	15340.				9001.	3944.	1160.	248.	
• 1301: 50. • 1310: 102. 1319: 79.	280.	506. 38.	716. 23.	845. 33.	81.3. 39.	605. 35.	388. 37.	196.	
PK IT ENER			KGND	FЫНМ			W CTS/	SEC %ERF	₹
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	Ø6 988	55. 85.		2. 42 2. 42	1021.90 1118.51 1128.44 1205.69	1107 1107	34 <i>6.</i> 709 34 1. 648	E 00 11.8 E 01 0.5 E 02 0.3 E 00 2.5	
5 3 646.				3. 08	1292. 46			E-01 11 6	

2.47

2.20

1314, 26 1285

1.330. 58 1323

38 7.422E 00

16 4.758E-01.13,5

\*\*\*\*\*\*\*\* 9:37:37 FM deleteration de la constant de la co 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7012, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 13DEC79 1619:37 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 PELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

657. 09

665. 38

1

3836.

356.

488.

498.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	984.		0. 0040 1. 5441 0. 3358	L (		13. 6 Ø. 4 2. 7
• 1009: 139. 1018: 178. 1027: 171.	151.	154. 16 168. 20 130. 15	5. 204.	141. 205. 140.	210.	152. 192. 147.	137. 160. 120.
1117: 5368. 1126: 8441. 1135: 91.	1361.7. 1	6832. 568 6274. 1648 61. 4	3. 1.3270.	8204.	3575.	1475. 1051. 74.	
<b>1310:</b> 85. 1319: 83.	1.99. 39.	39. 2 414. 62 32. 3 -UP CORREC	7. 726. 1. 25.	23.	574. 26.	337. 38.	
PK IT ENER				CHANNEL L			SEC WERR
<ul> <li>1 1 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	11 3638 07 8939	9. 1342 5. 1.011	. 2.39 . 2.41	1022, 95 1 1118, 56 1 1128, 48 1 1205, 68 1	L107 3 L107 3	3 8. 1268 4 6. 0658 4 1. 4908 7 4. 0708	E 02 0.3
5 1 645.				1291. 93		5 3.072E	

2. 39

3. 27

1314.36 1305 19 6.393E 00

19 5. 927E-01 10. 5

1.330, 94 1324

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0219F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6982.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

\*

ACQUISITION DATE: 13DEC79 1630:08 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

+

DETECTOR: GELI-8

\* LIBRARY:NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

1

665, 59

282.

427.

•	ELEMEN	IT	PER ENER		BKGM	D	AREA	CONCE	NTR.	1. SIGMA ERROR	ZERF	ROR
•	%-COPF %-ANT) %-ARSE	PER IMONY ENIC	51.1 564 657	l. 0 1. 1 2. 1	235 108 63	8. 9. 9 2.	0. < 1928. 3926.	0. 001 1. 646 0. 356	19 39 53	NOT DET 0. 0064 0. 0095	ECTABLE 6 2	E 3. 4 2. 7
•	1009: 1018: 1027:	178.	18	30 :	181.	226.		197.	206.	159. 186. 131.	169.	
•	1126	: 5650. : 891.8. : 92.	1433	24. 17:	530.	17346.	3780. 14042. 78.		3762.	1095.	4133. 231. 77.	
•	1301: 1310: 1319:	92. 82.	23	21. 37.	446. 1.6.	650. 41.	803. 22.	39. 791. 27. CORREC	584. 22.	39. 366. 36. 1. <i>0</i> 27	52. 173. 34.	
•	PK IT			AREA		KGND	FЫНМ			°W CTS∕	SEC ;	KERR
•		2 564.	97	37921. 94412. 2657.			2. 39 2. 40 2. 42	1118. 58 1128. 47 1205. 77	1108	32 6. 320 32 1. 574 1.7 4. 428	E 02 0	a. 5 a. 3 2. 4
•		l. 645. l. 657.	36		•	601. 649.	2. 54 2. 35	1.290. 92 1314. 36	1282	18 2 861 19 6 721	E-01 21	L. 9 1. 8

2.49

1331.36 1325

16 4.705E-01 12.1

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:39:54 AM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8826. 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 1640:38 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:**†**:

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEY/CHNL: 0.5003803

2. 000KV \* HALF LIFE RATIO: 8. 99

-0.5932283 KEV OFFSET:

\* REUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

665.55

331.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	1484. 12	:8458.	1. 817	'2	0. 0063	0.3
1009: 213. 1018: 247. 1027: 219.	231.	224. 222. 274. 300. 186. 202.	336.	314.	310.	245. 263. 203.	233. 266. 205.
1126:12399.	201.53. 24	381. 8091. 587. 24553. 127. 91.		11916.		2154. 1605. 114.	
1301: 53. 1310: 167. 1319: 122.	349. i 67.	59. 37.	1104. 52.	1049. 51.	778. 52.	519. 57.	
PK IT ENER	•	JP CORRECTE BKGND				1.039 พ CTS/	SEC %ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 645. 6 1 657.	07 133478 70 3561 96 288	1975. 1542. 1233. 764.	2, 56 2, 41 2, 38 2, 39 3, 02 2, 45	1022. 94 1118. 54 1128. 47 1205. 67 1292. 13 1314. 23	11.07 11.07 1.1.95 1.285	34 8. 944 34 2. 225 21 5. 934	E 02 0.3 E 00 2.2 E-01 15.1

2. 96

673.

1331. 27 1323

14 5. 521E-01 12. 6

\*\*\*\*\*\*\*\*\*\* 14 DE,C 1979 9:41:07 AM \*\*\*\*\*\*\*\* \*\*\*\*\* 91119065 QY RF SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219H TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 7162, 000 UNITS: SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE MAME: EFF. TAB1. ACQUISITION DATE: 13DEC79 1651:13 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC SENSITIVITY: :k 4.000 ELAPSED REAL TIME: 618. SEC SHAPE PARAMETER :4: 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10. :4: :4: DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% UNKMOWN SAMPLE REPORT PERK 1 SIGMA ELEMENT ENERGY BKGND AREA CONCENTR. ERROR **XERROR** X-COPPER 511.0 2706. € 0.0021 Ø. NOT DETECTABLE 2-ANTIMONY 564. 1 1144. 101.939. 1., 7805 0.0067 0.4 X-ARSENIC 657. 1 874. 4478. 0.3998 0.01.05 2.6 1009: 1.73. 199. 1.88. 176. 168. 183. . 193. 195. 189. 1018: 191. 204. 234. 228. 228. 235. 244. 215. 191. 1027: 171. 181. 164. 164. 164. 146. 1.62. 152. 172. 1117: 6304. 7866. 8067. 6520. 4221. 2068. 1.150. 1749. 4383. 1126: 9957. 15891. 19865. 19663. 15515. 9336. 4106. 1177. 264. 1135: 92. 80. 86. 84. 60. 65. 79. 81. 86. 1301: 35. 42. 32. 36. 44. 40. 44. 43. 56. 1310: 114. 262. 512. 740. 930. 851.. 674. 423. 191. 1319: 88. 33. 38. 22. 33. 39. 36. 36. 32. PULSE-PILE-UP CORRECTED DATA CORRECTION = 1.030 PK IT ENERGY AREA BKGND CHANNEL LEFT PW FMHM CTS/SEC **ZERR** 1 2 559. 11 42356. 1502. 2.39 35 7.059E 01. 11.18.57 1.107 0.5

2 2 564, 97 105044. 1178. 2.36 1128.46 1107 35 1.751E 02 Ø. 3 3 1 571.81 76. 716. 1, 89 1143. 95 1141 10 1.264E-01 52.0 1 575. 70 93. 662. 2.36 1151. 72 1150 12 1.542E-01 5 1 602.75 2942. 677. 2.31 18 4.904E 00 1205. 77 1196 2.3 6 1. 625.99 2. 23 1252, 22 1247 81. 442. 1. 343E-01 39. 1 645.90 1. 228. 470. 3.06 1292.00 1286 12 3.795E--01 15. 2 8 1. 657. 97 4615. 901. 2.39 1314.32 1302 23 7.691E 00 1.8 9 1. 665.35 217. 510. 2.19 1330.86 1326 1.2 3. 61.3E-01 16. 5

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219I

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7652.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

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ACQUISITION DATE: 13DEC79 1701:43 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4:

**。** 

:**}**:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HBLF LIFE RATIO: 8 00

\*

#### \_UNKNOWN\_SAMPLE\_REPORT

1.

1.

657. 07

665.16

4890.

321.

730.

562.

ELEMENT	PEAK ENERGY	BKGN	D f	REA	CONCE	ITR.	1 SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1	120	8. 1.08	316. 3818. 4729.	1. 782	22		19. 8 0. 4 2. 6
• 1009: 163. 1018: 182. 1027: 165.	21.9. 202. 1.64.	190. 217. 194.	238.	181. 245. 159.	239.	207. 221. 168.		190.
1117: 6745. 1126:10645. 1135: 103.	17211.	21103.	20399.	4352. 16553. 66.	10064.	4322.	1274.	
1319: 83.	246.	43.	790. 44.	993. 38.	933. 37.	711. 44.	61. 432. 37. 1. 034	
PK IT ENER			KGND	FWHM	CHRNNEL			SEC %ERR
<ul><li>1 1 511.</li><li>2 2 559.</li><li>3 2 564.</li></ul>	10 445	35.	1851. 1599. 1249.	2. 21 2. 39 2. 38	1.022. 58 111.8. 55 1128. 45	1107	10 5. 449 35 7. 422 35 1. 875	
<ul> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	76 29	93.	1137. 633.	2. 48 2. 91	1205. 79 1292. 11	1198	20 4. 988	

2. 33

2. 60

1314.33 1305

1330.50 1324

18 8. 150E 00

15 5.355E-01 12.0

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6574.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THEA

:1:

ACQUISITION DATE: 13DEC79 1712:18 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

: k

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

## UNKNOWN SAMPLE REPORT

ELEMENT	PERK ENERGY	BKGN	4D 1	REA	CONCEN		1 SIGMA ERROR	%ERR(	OR
%-COPPER %-ANTIMONY %-ARSENIC	511. Ø 564. 1 657. 1	237 110 63	92. 92	772. 2631. 4227.	0. 007 1. 769 0. 414	2	0. 0007 0. 0069 0. 0109	Ø.	6 4
• 1009: 157. 1018: 167. 1027: 197.	175. 184. 163.	144. 204. 150.	124. 255. 141.	159. 261. 144.	153. 237. 144.	146. 210. 122.	1.60. 198. 1.41.	135. 179. 143.	
1117: 5781. 1126: 8970. 1135: 85.	721.1 14532. : 73.	7261. 17906. 58.	5898. 17580. 58.	3895. 14178. 55.	1908. 8627. 61.	1068. 3679. 77.	1474. 1028. 100.	4075. 206. 77.	
1301: 28. 1310: 103. 1319: 71.	30. 244. 42. ULSE-PILI	25. 468. 34. E-UP CO	39. 717. 27. DRRECTEI	32. 824. 33. DATA.	57. 751. 20. CORRECT	40. 641. 37. TON =	56. 391. 18. 1. 029	63. 184. 26.	

	PK	IT	ENERGY	AREA	BKGMD	FWHM	CHANNEL	LEFT	РЩ	CTS/SEC	%ERR
	1 2		51.0. 96	794.	2444.	3. 73	1022. 34			1. 324E 00	9. 6
	3		559. 1.1. 564. 97	38604. 95293.	1366. 1134.	2. 40 2. 38	1.118. 56 1.128. 46			6. 434E 01 1. 588E 02	0.5 A.3
	4	1	570. 81	128.	588.	2. 11.	1141. 93			2. 128E-01	
	-	1	602. 76	2546.	743.	2. 30	1205. 79			4. 244E 00	2. 5
)	6 7	1 1	646. 16 657. 06	301. 4348.	502. 651.	3. 52 2. 47	1292, 52 1314, 32			5. 016E-01 7. 247E 00	12. 2 1. 8
	8	1.	665. 40	306.	444.	2. 44	1330. 98			5. 103E-01	

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:44:41 AM \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7439, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 1722:49 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: *600.* SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8

\* L.JBRARY: NUCL. L.IB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

-0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 99%

#### UNKNOWN SAMPLE REPORT

2

665, 28

293.

296.

2.43

1330.74 1306

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR	1 SIGMA . ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511 0 564. 1 657. 0		486. 97082. 4315.		Ø. ØØ63	0.4
• 1009: 193. 1018: 173. 1027: 162.	163. 186. 167.	159. 186 208. 223 143. 161	. 236.	229.	168. 157. 204. 196. 143. 149.	192.
1117: 6132 1126: 9409 1135: 110		7401. 6170 8434. 18459 72. 71	. 14930.	9089. 3	.046. 1629. :895. 1119. 98. 74.	4154. 247. 109.
1301: 31. 1310: 100. 1319: 98.	30. 254. 38. ULSE-PILE	36. 37 492. 774 19. 21 -UP CORRECT	. 826. . 35.	875. 33.	32. 43. 621. 387. 32. 36. N = 1.029	69. 173. 48.
PK IT ENER	GY ARE	A BKGND	FWHM	CHANNEL LE	FT PW CTS	/SEC %ERR
<ul> <li>1 1 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 571.</li> <li>5 1 602.</li> <li>6 1 645.</li> </ul>	11 3979 07 9987 20 10 69 265	5. 1491. 1. 1195. 3. 674. 7. 988.	3. 13 2. 37 2. 39 2. 07 2. 32 2. 94	1022. 40 10 1118. 55 11 1128. 47 11 1142. 73 11 1205. 65 11 1291. 49 12	.08 34 6.63 .08 34 1.66 .41 9 1.71 .96 23 4.42	2E 01. 0.5 5E 02 0.3
7 2 657.			2. 36	1314. 28 13		

32 4.891E-01 10.3

\*\*\*\*\*\*\* 9:45:51 AM \*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7719, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 1733:19 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HFILF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

:40

#### UNKNOWN SAMPLE REPORT

6

1

1

657.11

665, 25

5036.

350.

896.

535.

ELEMENT	PEAK ENERGY	BKG!	AD (	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPPER • %-ANTIMONY %-ARSENIC	510. 7 564. 1 657. 1	245 133 86	L6. 10:	418. 9384. 4871.	0. 003 1 785 0. 411		0. 0006 0. 0066 0. 0105	17. 5 0. 4 2. 6
• 1009: 215. 1018: 208. 1027: 198.	21.8.	191. 241. 195.	177. 258. 183.	188. 265. 161.	186. 273. 171.	185. 236. 181.	186. 214. 189.	170. 204. 180.
1117: 6881. 1126:10551. 1135: 109.	17232.	8604. 21240. 83.	7028. 20924. 89.	4353. 16636. 94.	2217. 10139. 82.	1216. 4444. 9 <sub>,</sub> 0.	1721. 1194. 92.	4754. 285. 98.
1301: 49. 1310: 113. 1319: 71.	289.	43. 540. 41. E-UP CO	44. 770. 41. ORRECTE	53. 970. 35. D DATA	963. 43.		58. 463. 50. 1. 034	72. 1.99. 51.
PK IT ENE			3KGND	FИНМ	CHRMNEL			SEC %ERR
<ul> <li>1 1. 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	10 453 07 1130 70 31	92. .57.	2537. 1847. 1361. 1297. 682.	2. 38 2. 36 2. 37 2. 33 2. 46	1021. 86 1118. 54 1128. 46 1205. 67 1292. 09	1109	13 7. 204 30 7. 544 30 1. 885 22 5. 262 16 4. 733	E 01 0.5 E 02 0.3 E 00 2.4
		erwe de	Total Confession o		alastinas films follows	arles \$400 *100 *100 *100 *	AU T. 133	الب • ۳۰ سلساسات سا

2.40

2.42

1314. 41 1302

1330.67 1323

21 8.394E 00 1.7

15 5.826E-01 11.0

\*\*\*\*\* 14 DEC 1979 9:47:01 AM \*\*\*\*\*\*\*\*\*\* \*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0219M

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8012, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. THB1

:4:

ACQUISITION DATE: 13DEC79 1743:54 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC. \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 00 -0. 5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

1

657. 09

665. 16

5642.

352.

908.

620.

ELEMENT	PEAK ENERGY	BKGND	ARE	:A 0	CONCEN	TR.	L SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	1491.	1.2085	7.	1 9046	····	0 0069	ന ഷ
• 1009: 211. 1018: 238. 1027: 188.	238.	274.	292.	295.	285.	305	216. 210. 190.	248
1117: 7386. 1126:11507. 1135: 131.	19069. 2	3544. 23	:535. 18	745. 11	L194.	4909.	1929. 1407. 115.	314.
• 1301: 46. 1310: 132. 1319: 100.	306.	598. 47.	899. <u>1</u> 40.	.111. 39.	994. 37.	838. 41.	500. 36.	63. 274. 46.
PK IT ENER								EC %ERR
2 2 559. 3 2 564. 4 1 571.	08 12516 76 12	8. 20 2. 15 7. S	114. 2. 144. 2. 163. 1.	32 11: 34 11: 68 11:	22. 60 : 18. 58 : 28. 48 : 43. 85 :	1110 : 1110 :		
5 1 602. 6 1 645.		8. 10 7. 6	191. 2. 133. 2.	36 120	95. 75 : 92. 00 :	1197 :	18 5.680E	00

2.43

2.64

131.4. 36 1.303

1330.50 1325

21 9.404E 00

14 5.859E-01 11.5

▶9111.9065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0219N

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7665.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

\*

ACQUISITION DATE: 13DEC79 1754:28 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4

**>** 

DETECTOR: GELI-8

8 \* LIBRARY:NUCL.LIB1

2. 000KV

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEV/CHNL: 0.5003803 \* HALF LIFE RATIO:

+

#### UNKNOWN SAMPLE REPORT

665. 20

289.

347.

ELEMENT	PEAK ENERGY	EKGN	ID	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1.	95	i0. 9	5719.	1. 579	97	NOT DET 0.0061 0.0091	ECTABLE Ø. 4 2. 6
1018: 15			212.	228.	230.	205.	185. 216. 149.	201.
1117: 574: 1126: 874: 1135: 8	3. 14980.		18505.	15007.	9034.	3830.		221.
	4. 217.	412. 39.	704. 33.	790. 32.	828. 31.	656. 26.	380.	57. 239. 57.
•	ERGY AI		KGND				w cts/	SEC XERR
<ul> <li>1 2 55</li> <li>2 2 56</li> <li>3 1 60</li> <li>4 1 64</li> <li>5 4 65</li> </ul>	4. 09 98: 2. 69 2: 5. 56 ;	470. 571. 228.	978.	2. 33 3. 20	1118.60 1128.51 1205.65 1291.33	1107 1198 1286		E 02 0.3 E 00 2.5 E-01 14.0
			347.	a. 41	1314. 46	1.500	33 7.085	E 00 1.7

2.72

1330.58 1305

33 4.813E-01 11.0

\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:49:26 AM \*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q2190

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8901.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 13DEC79 1804:59 \* FWHM(1332)2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: *500.* SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEY/CHNL: 0.5003803

OFFSET: -0.5932283 KEV \* LIBRARY: NUCL. L181

2. 000KV \* HALF LIFE RATIO: 8. 99 \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

8

1

1

657.11

665. 50

5682.

397.

ELEMENT	PEAK ENERGY	BKGND	RREA	CONCEN	ITR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	3344. 1574. 12 998.	27502.	1, 815	î4	0 0063	0 7
• 1009: 222. 1018: 252. 1027: 239.	254.	278. 283.	303.	301.	302.	203. 269. 219.	239.
1117: 7860. 1126:12029. 1135: 143.	19839. 24	805. 24734.	19830.	12043.	5139.	1451.	334.
1301: 47. 1310: 137. 1319: 86.	287. 44.	562. 964.	1067. 44.	1121. 45.	828. 41.	524. 55.	96. 263. 50.
PK IT ENER	GY AREF	I BKGND	FWHM	CHANNEL	LEFT P	W CTS/S	SEC %ERR
2 2 559. 3 2 564. 4 10 571. 5 10 575. 6 1 602.	09 132485 56 128 22 106 74 3661	2214. 5. 1635. 6. 524. 6. 464. 1075.	2. 38 2. 34 1. 61 1. 61 2. 36	1022. 41 1118. 59 1128. 50 1143. 43 1150. 76 1205. 74	1109 1109 1140 1140 1197	32 8. 7941 32 2. 2081 15 2. 1331 15 1. 7621	E 00 12.2 E 01 0.5 E 02 0.3 E-01 27.3 E-01 31.0 E 00 2.1
7 1 645.			2. 57	1.291. 79	1.285	14 4. 854	E-01 15.1

2.35

2. 32

1314. 40 1304

1331. 17 1325

21 9.469E 00

12 6.610E-01 10.0

1036.

\*\*\*\*\*\*\* 9:50:37 AM \*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0219P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7884.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*<sup>|</sup>|

ACQUISITION DATE: 13DEC79 1815:37 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

6

1.

1.

657.12

665.71

4416.

345.

71.4.

598.

ELEMENT	PEAK ENERGY	BKGM	AD I	AREA	CONCEN	ITR.	1. SIGMA ERROR	%ERROR
%-COPPER •%-ANTIMONY %-ARSENIC	510. 7 564. 1 657. 1	199 96 69	3. 10	373. 2467. 4286.		:1 )2 )7		17. 7 0. 4 2. 6
• 1009: 177. 1018: 165. 1027: 171.	190.	180. 248. 156.	159. 235. 162.	162. 223. 158.	252.	183. 234. 137.	205.	180. 168. 164.
1117: 6037. 1126: 9317. 1135: 110.	15922.	7801. 19958. 81.	6398. 20096. 74.	4163. 16185. 80.	9720.			4090. 256. 79.
1319: 73.	224.	439. 37.	30.	875. 38.	35.	676. 40.	429. 46.	61. 194. 37.
PK IT ENE			KGND	<b>ГИНМ</b>	CHANNEL			SEC %ERR
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	. 13 406 . 10 1.055 . 76 29	88. 91.	2054. 1423. 992. 948.	2. 25 2. 35 2. 32 2. 41	1021. 86 1118. 60 1128. 53 1205. 78	1107 1107	11 6.411 33 6.781 33 1.760 20 4.986	E 02 0.3
5 1 646.			714.	3. 35	1292. 25	1.281	21 4.948	E-01 14.2

2.36

3.01

1314. 42 1306

1331.60 1323

18 7.360E 00 1.8

20 5.747E-01 11.6

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE 1DENTIFICATION: 02190

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 81.99.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 13DEC79 1826:07 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL.I-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKMOWN SAMPLE REPORT

1

1

657. 14

665.43

4686.

226.

636.

480.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT	1 SIGM R. ERROR	
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	2492. 1044. 10 617.	32929.	1., 5970	0. 0 <u>0</u> 6	6 15.1 0 0.4 5 2.6
• 1009: 166. 1018: 173. 1027: 208.	215. 2	66. 172. 18. 221. 87. 174.	256.	232.	244. 215	. 183.
1117: 6226. 1126: 9241. 1135: 118.		95. 201.79.	16390.	9929.	1118. 1527 4121. 1152 87. 80	. 260.
1301: 47. 1310: 92. 1319: 85.	236. 4	85. 708. 39. 29.	911. 31.	905. 36.	703. 462 36. 39	:. 202. J. 28.
PK IT ENER					EFT PW CT	
2 2 559. 3 2 564. 4 1 602.	11 106240.	2572. 1422. 1077. 1080.		1022. 56 1 1118. 63 1 1128. 54 1 1205. 78 1	108 31 6.9 108 31 1.7	.10E-01 15.1  49E 01
5 1 646.		845.	2. 32	1292.20 1		92E-01 20.1

2. 38

2. 09

1314.47 1305 18 7.810E 00

1.2 3. 762E-01 15. 5

1331. 03 1325

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0219R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6988.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

**:** 

ACQUISITION DATE: 13DEC79 1836:38 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

•	ELEMEN	Υ	PEAK ENERGY	BKG	MD	AREA	CONCE		1 SIGMA ERROR	%ER	ROR
•	%-COPPE %-ANTII %-ARSEM	YMONY	511. 0 564. 1 657. 2	9		0. < 0626. 3930.	. 0. 00: 1. 65: 0. 37:	28	NOT DET 0. 0065 0. 0101.		E. 0. 4 2. 7
•	1009: 1018: 1027:	164. 1.49. 153.	171. 175. 135.	152. 192. 152.	147. 188. 173.	151. 210. 160.	1.65. 215. 1.43.	1.62. 191. 118.	148. 191. 134.	178. 150. 121.	
•	1117: 1126: 1135:		6859. 13836. 59.	7015. 17560. 58.	5834. 17820. 56.	3718. 14598. 57.	1770. 9005. 61.	920. 3725. 64.	1228. 1055. 86.	3448. 195. 82.	
•	1301: 1310: 1319:	28. 87. 68. P	26. 192. 36. ULSE-PI	30. 413. 30. F-UP C	27. 601. 20. opperte	31. 786. 28. D DATA.	31. 743. 38. CORREC	39. 678. 28.	36. 385. 37.	62. 180. 25.	
•	PK IT	ENER 559.	GY A		OKKECTE BKGND 1315.	р рити. FWHM 2.30	CHANNEL 1118. 63	LEFT F	1.027 ™ CTS/ 34 5.960		ZERR Ø 6

	1 1%	A 1	ELINELINE T	пкшп	DIVUND	L MLII.I	CHMNNEL LEFT	FW CISZSEC	%EKK
•			559. 15 564. 13	35762. 93076.	1315. 1024.		1118.63 1108 1128.58 1108		
-	3	1	571 18	1.31.	598.	2, 29	1142.67 1141	9 2.188E-01	28. 1
~	5	1.	602, 77 646, 05	2587. 235.	1.033. <b>51</b> 5.	2. 11	1205.81 1195 1292.30 1283	25 4.312E 00 17 3.924E-01	
•	6 7	1	657. 17 665. 53	4036. 282.	663. 472.		1314. 53 1304 1331. 24 1325	21 6.727E 00 16 4.705E-01	

911.19065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0219S

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 6663.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 13DEC79 1847:08 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

## UNKNOWN SAMPLE REPORT

•	ELEMEM.	•	PEAK ENERGY	BKG	ND I	AREA	CONCEN	ITR.	1. SIGMA ERROR	%ERR	:OR
•	%-COPPER %-ANTIMONY %-ARSENIC		51.1 0 564. 1. 657. 1.	54. 1.		307. 9495. 3475.	0. 003 1. 523 0. 350	4	9. 9996 9. 9963 9. 9996	Ø	). 4 ). 4 ). 7
•	1009: 1018: 1027:	148. 118. 126.	1.39. 148. 103.	144. 163. 149.	118. 166. 129.	133. 191. 142.	137. 173. 119.	145. 178. 139.	134. 160. 101.	141. 141. 126.	
•	1117: 1126: 1135:		6068. 12129. 57.	6178. 15721. 59.	5070. 15697. 51.	3329. 12705. 49.	1632. 7804. 51.	890. 3197. 60.	11.28. 853. 67.	2957. 183. 65.	
•	1301: 1310: 1319:	42. 76. 66.	26. 161. 35. ULSE-P11	25. 354. 28.	29. 561. 29.	37. 703. 20.	36. 685. 21.	34. 543. 25.	38. 353. 30.	53. 146. 30.	
	muz voe	E			ORRECTE	D DATA.	CORRECT	IOM =	1.024		

	PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL LEFT	PΜ	CTS/SEC	%ERR
•		1	511 03 559. 15	314. 31744.	1649. 1105.	2. 87 2. 33	1022. 47 1018 1118. 63 1108		5. 232E-01	
	3	2	564. 12	81372.	822.	2. 30	1128. 56 1108		5. 291E 01 1. 356E 02	0. 6 0. 4
	5	1. 1	602. 75 645. 93	2231. 185.	656. 528.	2. 24 2. 40	1205. 77 1195 1292. 07 1285		3.719E 00 3.087E-01	2. 7 19. 2
	6 7	1 1	657. 1.4 665. 48	3557. 247.	494. 322.	2. 35 2. 33	1314. 47 1303 1331. 13 1324		5. 928E 00 4. 1.21E-01	

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q219T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7018.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

sk:

ACQUISITION DATE: 13DEC79 1857:34 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 · \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

1.

665, 43

327.

367.

ELEMENT	PEAK ENERGY	BKGM	ID I	AREA	CONCE		1 SIGMA ERROR	%ERROR	?
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	87	'4. 8i	0. ( 6373. 3760.	1. 574		0. 0063	ECTABLE 0. 4 2. 7	•
• 1009: 150. 1018: 134. 1027: 142.	141	155. 152. 140.	148. 172. 135.	144. 172. 119.	1.88.	1.40. 153. 1.38.	162.	163.	
1117: 5079. 1126: 7584. 1135: 95.	13311.		5510. 17122. 54.	3594. 13977. 68.	8291.		1.195. 948. 75.	3179. 211. 58.	
• 1310: 86. 1319: 59.	203.	361. 27.	572. 24.	724. 29.	22.	634. 26.	25.		
PK IT ENER	RGY AR	EA E	KGND	FWHM	CHANNEL	LEFT F	W CTS/	SEC %ER	R.
1 2 559. 2 2 564. 3 1 602. 4 1 646.	12 887 81 24	'07. 45.		2. 30 2. 37	1118. 65 1128. 57 1205. 89 1292. 91	1109 1194	30 5.693 30 1.478 30 4.076 16 3.611	E 02 0.3 E 00 2.8	3
5 1 657.	20 38				1314. 58		17 6. 436		

3.35

1331.04 1324

14 5. 442E-01 10. 1

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0220A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7119,000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 13DEC79 1908:05 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:#:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CRLIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 2.000KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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#### UNKNOWN SAMPLE REPORT

657. 1.3

665.51

1

2426.

1.67.

397.

234.

ELEMENT	PEAK ENERGY	BKGND	F	REA	CONCEN		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC		2491. 475. 392.	45		0. 011 0. 81.8 0. 228	34		6. 8 Ø. 5 3. 1
1009: 76. 1018: 1.25. 1027: 129.	82. 172. 105.	197.	240.		255.	228.		123. 157. 65.
1117: 3208. 1126: 3891. 1135: 35.	6848.	8927. 9	084.	2477. 7408. 37.	4575.	497. 1935. 39.	549.	1673. 98. 44.
1301: 22. 1310: 46. 1319: 37.			393. 16.	9.	498. 20.	14.	239. 1.3.	26. 116. 24.
PK IT ENER				FЫНМ	CHANNEL			SEC %ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 644.	1.9 2213 14 4614 84 136	:1. 6 ·7. 4 ·3. 5	182.	3. 31 2. 31 2. 29 2. 25 4. 37	1022. 56 1118. 71 1128. 61 1205. 94 1289. 87	1109 1109 1197	27 1. 954 32 3. 689 32 7. 691 26 2. 272 15 3. 327	E 01 0.7 E 01 0.5 E 00 3.7

2. 28

2. 17

1314.45 1307

1331. 20 1325

18 4.044E 00

14 2.789E-01 15.2

\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 9:57:47 FM \*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02208

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9067, 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*<sup>|</sup>

ACQUISITION DATE: 13DEC79 1918:27 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

ж.

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHML: \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

657. 15

665. 65

2679.

165.

341.

252.

1.

1

ELEMENT		EAK ERGY BK	GND	AREA	CONCEN		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMON %-ARSENIC	IY 56	54. 1	433. 4	1504. 9033. 2634.	0. 011 0. 694 0. 198	13	0. 0005 0. 0035 0. 0058	4. 7 0. 5 2. 9
1018: 1	.29. 1	83. 107 L66. 220 L05. 87	. 311.	86. 316. 79.	308.	112. 258. 78.	81. 216. 87.	106. 195. 76.
1117: 33 1126: 42 1135:	263. <b>7</b> 3	491. 4649 351. 9697 34. 35	. 9711.	2426. 7943. 42.	1152. 4956. 33.	2068.		1676. 118. 31.
<b>•</b> 1310:	56. :	24. 26 137. 249 17. 16 E-PILE-UP	. 429. . 21.	18.	514. 20.	21. 439. 15. TION =	245. 16.	38. 129. 25.
PK IT E	NERGY	AREA	BKGND	FЫНМ	CHANNEL	LEFT P	W CTS/	SEC ZERR
2 2 5 3 2 5 • 4 1 6	511. 02 559. 17 564. 14 502. 80	1529. 23155. 49857. 1400.	1759. 598. 440. 386.	3. 06 2. 28 2. 29 2. 28		1107 1107	20 2.549 31 3.859 31 8.309 20 2.333	E 01 0.7 E 01 0.5
5 1. e	345. 79	104.	238.	2. 34	1.291. 78	1286	12 1. 725	E-01. 23. 4

2. 31

2.93

1314.48 1306

1331.48 1325

17 4.464E 00

15 2.752E-01 15.8

\* \*\*\*\* 14 DEC 1979 9:59:02 AM \*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220C

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 7711, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 1928:50 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 607. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEY/CHNL: 0.5003803

2. 000KV \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

665.66

131.

155.

ELEMENT	PEAK ENERGY	BKGND	<b> -</b>	IREA	CONCE		1 SIGMA ERROR	%ER	ROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1.	439.	36	346.	Ø. 606	33	0. 0034		5. 2 0. 6 3. 3
• 1009: 74. 1018: 91. 1027: 97.	119.	69. 168. 63.	209.	232.	209.	215.	92. 175. 63.	121.	
1117: 2556. 1126: 3100. 1135: 34.	5513.	7151. 7	<sup>7</sup> 416.	5968.		1480.		84.	
• 1301: 13. 1310: 33. 1319: 33.	108.	197. 13.	322. 6.	372. 1.5.	397. 17.	296. 11.	177. 15.	95.	
PK IT ENER			3ND	<b>Г</b> ЫНМ			W CTS/	SEC:	%ERR
2 2 559. 3 2 564.	14 367	50. 5 73. 4	549. 145.	2. 29 2. 29	1022. 56 1118. 70 1128. 61	1.108 11.08	20 1. 900 35 2. 910 35 6. 129	E 01 E 01	5. 2 0. 8 0. 5
<ul><li>4 1. 602.</li><li>5 1. 657.</li></ul>				2. 10 2. 36	1205.86 1314.43		21 1.612 22 3.250		4. 5 2. 6

2. 64

1331.50 1326

13 2.184E-01 16.1

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220D

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 5821.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:\*:

ACQUISITION DATE: 13DEC79 1939:12 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 606. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

**>** 

աս ժագարագրացը բանագրանությանը արանագրանը որուն արանագրանը արանագրանը արանագրանը արանագրանը արանագրանը արանագր

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

## UNKNOWN SAMPLE REPORT

5

1

1

657.10

665.45

1.493.

140.

222.

133.

• ELEMENT	PEAK ENERGY	BKGND	)	REA	CONCE		1 SIGMA ERROR	%ERROR	ı •
2-COPPER 2-ANTIMONY 2-ARSENIC	511 2 564. 1. 657. 1.	846 335 220	. 21	1009. 7068. 1.478.		92	0. 0006 0. 0039 0. 0062	5. 2 0. 6 3. 5	;
• 1009: 52. 1018: 105. 1027: 84.	54. 113. 72.	138.	68. 169. 38.	54. 200. 54.	226.	64. 204. 57.	57. 139. 49.	76. 114. 48.	
1117: 1868. 1126: 2224. 1135: 25.	2575. 4195. 14.		2234. 5426. 1.3.	1386. 4439. 25.		281. 1145. 19.	352. 299. 22.	946. 52. 24.	
• 1310: 23. 1319: 20.	9. 77. 8. ULSE-PILE	8. 148. 11. E-UP COR	8.	6.	276. 12.	215. 11.	1.55. 7.	17. 65. 10.	
PK IT EMER			:GND	FWHM	CHANNEL			SEC %ER	:R
<ul> <li>1 1 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	19 1299 1.4 2734	95.	854. 430. 338. 280.	2. 85 2. 27 2. 28 2. 44	1022, 72 1118, 71 1128, 61 1205, 79	1108 1108	1.7 1. 6986 35 2. 1666 35 4. 5576 27 1. 3206	E 01 0.9 E 01 0.6	) 5

2.47

2.85

1314.39 1303

1331. 07 1326

22 2.488E 00

15 2.332E--01 14.5

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:01:24 AM \*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10054,00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 1949:31 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL.I-8

\* LIBRARY: NUCL, L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 -0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1

657.19

3065.

321.

•	ELEMEN	JT	PEAI ENER(		GND	AREA	CONCE	NTR.	1. SIGMA ERROR	%ERROR
•	%-ANT)	PER IMONY ENIC	564.	1	494.	54088.	Ø. 69 <sup>,</sup>	45	0. 0007 0. 0033 0. 0058	5. 4 Ø. 5 2. 8
•	1018:	92. 159. 150.	248	3. 275	. 105 . 324 . 104	. 363.	357.		277.	
•		: 3799. : 4612. : 58.	8200	9. 10560	10644	. 8779.	5529.	615. 2260. 42.	652.	1952. 135. 57.
•	1301. 1310: 131.9	: 70. : 62.	30	5. 292 3. 24	). 447 H. 30	. 607. . 16.	1.8.	488. 1.9.	322. 26.	
•	PK II			AREA		ЕЮ ЮНТН.	CORRECT CHANNEL		1.019 W CTS/	'SEC %ERR
•	2 8 3 8 4 9 5 :	l. 510. 2 559. 2 564. L 571. L 602. L 646.	19 ; 14 ; 76 80	55089. 90.	3613. 700. 503. 458. 535. 328.	3. 23 2. 30 2. 31 2. 33 2. 22 2. 59	1022. 39 1119. 73 1128. 61 1143. 83 1205. 87 1292. 19	1108 1108 1139 1195	33 3.004 29 4.400 29 9.181 12 1.498 20 2.493 14 1.868	NE 01 0.6 NE 01 0.4 NE-01 35.6 NE 00 3.4

2.41

1314.56 1306

2.0

18 5. 109E 00

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0220F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6439,000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 13DEC79 1959:54 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:44

ومسارس مومارس وسنى رمى وممان عود

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1
DATE CALIBRATED: 260CT79 1434:06 \* FNFRGY TO FRENCE:

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

657.16

665.41

14608.

917.

1

1.

ELEMENT	PEAK ENERGY	BKGNE	) F	REA	CONCE	YR. "	1 SIGMA ERROR	ZER	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 2	6933 3782 2534	2. 262	0. < 2553. 3418.	: 0. 004 5. 274 1. 447	10	NOT DET 0.0150 0.0318		.E 0. 3 2. 2
1009: 536. 1018: 524. 1027: 509.	480. 540. 475.	`470. 555. 490.	499. 589. 462.	541. 590. 436.	509. 569. 467.	490. 609. 511.	422. 546. 490.	497. 508. 458.	
1117:18789. 1126:23282. 1135: 513.	40826. 5		20481. 52606. 363.	13168. 41857. 353.	6240. 25566. 359.	3118. 10836. 366.	3838. 31.71. 355.	10050. 861. 376.	
• 1301: 126. 1310: 311. 1319: 264.	135. 650. 157. 'ULSE-PILE	140. 1338. 127. E-UP COR	149. 2237. 138. RRECTEI	148. 2774. 145. DATA.	141. 2725. 129. CORRECT	152. 2193. 122. TION =	166. 1447. 171. 1. 089	197. 635. 156.	
PK IT ENER	:GY ARE	EA Bł	KGND	FWHM	CHANNEL.			'SEC	%ERR
<ul><li>1 2 559.</li><li>2 2 564.</li><li>3 1 571.</li></ul>	11 28584 43 19	46. 4 99. 3	1857. 1118. 3871.	2. 31 2. 30 2. 32	1118. 63 1128. 55 1143. 17		33 2. 233 33 4. 764 11 3. 323	IE 02	0. 3 0. 2 16. 7
<ul><li>4 1. 602.</li><li>5 1 645.</li></ul>			5644. 1.806.	2. 31. 2. 54	1205. 88 1291. 98	1195 1286	29 1. 299 12 9. 325		1. 8 L2. 0

2.32

2. 32

1314.51 1306

1331.00 1324

18 2.435E 01

15 1.528E 00

8. 2

2758.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:03:47 AM \*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7362, 999 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

UNITS:

ACQUISITION DATE: 13DEC79 2011:00 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 698. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1.

665, 26

188.

205.

2.94

ELEMENT	PEAK ENERGY (	KGND	AREA	CONCE		1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1	1431. 442. 4 310.	12981.	Ø. 756	56	0. 0040	Ø. 5
1009: 81. 1018: 129. 1027: 93.	157. 20	77. 96. 31. 228. 94. 66.	277.	292.	244.	119. 209. 74.	139.
1117: 2943. 1126: 3661. 1135: 33.	6543. 82			4473.		599. 534. 37.	88.
1301: 16. 1310: 47. 1319: 36.	22.	20. 7.	26.	15.	1.2.	12.	23. 122. 21.
•	ULSE-PILE-UI GY AREA	BKGND				2.013 W CTS/	SEC %ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 645. 6 1 657.	20 20259. 15 43558. 85 1332. 91 93.	1450. 567. 448. 353. 266. 314.		1022. 55 1118. 73 1128. 62 1205. 96 1292. 03 1314. 63	1107 1107 1198 1283	18 2.133 35 3.377 35 7.260 17 2.219 15 1.547 21 3.883	E 01 0.7 E 01 0.5 E 00 3.4 E-01 27.1

1.330. 68 1.325

15 3.131E-01 13.1

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:04:57 AM \*\*\*\*\*\*\*\*\* \*\*\*\* 1:4:4:4:4:4:4:4:4:4:4:

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9903, 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

ACQUISITION DATE: 13DEC79 2021:22 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV 85. 00%

\* ABUNDANCE LIMIT:

## UNKNOWN SAMPLE REPORT

1.

665, 52

230.

273.

ELEMEN	T	PEF ENER		KGND	PF	EA	CONCE	NTR.		IGMA ROR	ZEF	RROR
%-COPP %-ANTI	MONY	564	. 2	2024. 551.	518	523. 199.		12 99		0006 0033		4. 9 0. 5
%-ARSE	NIC	657	'. 2	356.	25	566.	9. 18:	17	Ø. I	0054		3.0
1009: 1018:						94. 297	110. 304.	104. 293.		93. 245.	120. 171.	
	118.					101					93.	
	3396. 4215.	452 770				2587. 8534.		586. 2144.		618.	1679.	
1135:		4				34.		42.			101. 36.	
	22.			3.		20.					24.	
1310: 1319:		1	.7. 2		22.	14.		5.		266. 17.	119. 23.	
i .	F	'ULSE-	PILE-UP	CORRE	CTED	DATA.	CORREC:	TION =	1.	017		
PK IT	EMER	(GY	AREA	BKGN	ID F	гынм	CHANNEL	LEFT F	PW	CTS/	'SEC	%ERR
1 1			1549.	205		3. 26	1022. 56		22	2. 581	E 00	4. 9
2 2 3 2 4 1			23992.	71		2. 27	1118. 73			3. 999		9. 7
3 d 4 1				56 45		2. 27 2. 35	1128. 64 1205. 82			8. 660 2. 464		9.4
5 1			2609.	36		2. 27	1314, 58			2. 461 4. 348		3. 3 2. 2
ام سو		}*** _# _										

2.97

1331, 21, 1324

16 3.834E-01 12.2

\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:06:07 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7253.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 2031:44 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 'ELAPSED REAL TIME: 607. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: --0. 5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

665, 55

145.

179.

1.96

ELEMENT	PEAK ENERGY	BKGND	FREA	CONCENT		SIGMA RROR	XERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	358. 3	5399.	0. 0097 0. 6348 0. 1829	Ø	. 0006 . 0036 . 0059	6. 1 0. 6 3. 2
• 1009: 70. 1018: 88. 1027: 96.	115.	55. 76. L45. 228. 65. 73.	61 224. 72.	187.	76. 191. 66.		91. 124. 54.
1117: 2394. 1126: 3025. 1135: 33.		378. 2823. 394. 6942. 14. 14.	1.865. 5876. 11.		426. 1512. 18.		1.238. 78. 37.
• 1301: 11. 1310: 42. 1319: 25.	86. : 21.	9. 17. 200. 279. 9. 13. JP CORRECTE	332. 9.		271. 9.		22. 95. 13.
PK IT ENER		BKGND	FWHM	CHANNEL L			EC %ERR
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 571.</li> </ul>	20 16842. 15 35814. 15 88.	476. 362. 193.	2. 88 2. 29 2. 31 2. 64	1022. 32 1/ 1118. 74 1: 1128. 63 1: 1142. 61 1:	107 34 107 34 140 9	1.613E 2.807E 5.969E 1.470E	01 0.8 01 0.5
5 1 602. 6 1 657.		409. 223.	2. 27 2. 47	1206.06 1: 1314.57 1		1. 618E 3. 176E	

1331. 28 1325

12 2.414E-01 15.6

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0220J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7705.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**;**k

:4:

ACQUISITION DATE: 13DEC79 2042:03 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 608. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

, the state of the

DETECTOR: GELI-8 \* L1BRARY:NUCL.LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

DHTE CRLIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

6

7

1.

1

1

646, 40

657.19

665.58

1.45.

2131.

160.

ELEMENT	PERK ENERGY	BKGND	FIREA	CONCENT		SIGMA RROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	510, 9 564, 2 657, 2	1365. 394. 232.	1353. 39925. 2103.	0. 0131 0. 6752 0. 1931	2 0.	0006 0037 0060	4. 8 Ø. 5 3. 1
• 1009: 85. 1018: 117. 1027: 132.	61. 167. 81.	80. 217. 2 79.	68. 80 24. 263 75. 60	. 230.	89. 244. 68.	178. 1	07. 38. 63.
1117: 2735. 1126: 3312. 1135: 44.	5999. 7		264. 2073 271. 6571 21. 24	4048.	444. 1775. 12.	482.	.74. 99. 36.
<ul><li>1310: 32.</li><li>1319: 45.</li></ul>		17.	19. 16 35. 421 15. 13 CTED DATA	. 403. . 12.	14. 325. 17. ION = 1.	242.	17. 94. 17.
PK IT ENER	GY AREA	a BKGI	<b>I</b> D FWHM	CHANNEL I	EFT PW	CTS/SEC	: %ERR
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 571.</li> <li>5 1 602.</li> </ul>	20 18885 15 40463 34 9	5. 57 1. 49 7. 42	33. 3.31 73. 2.26 30. 2.28 22. 4.70 31. 2.31	1022. 31 1 1118. 74 1 1128. 63 1 1142. 99 1 1206. 05 1	L109 29 L109 29 L140 16	3. 147E Ø	

3.34

2.40

2.52

1293.01 1283

1314.56 1307

1331.33 1324

19 2.422E-01 17.3

17 2.667E-01 15.2

2.4

16 3.551E 00

241.

235.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:08:25 AM \*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7043, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 13DEC79 2052:25 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

•	ELEMEN	T	PEAK ENERGY	BKG	ND :	AREA	CONCE	VTR.	1 SIGMA ERROR	ZER	ROR
•	%—COPP %—ANTI %—ARSE	MONY	511. 1 564. 1. 657. 2	43	69. 29	2571. 6876. 6002.	0. 02 5. 50 1. 61	30	0. 0015 0. 0152 0. 0348		5. 5 0. 3 2. 2
•	1009: 1018: 1027:	663.	609. 698. 578.	527. 778. 559.	625. 851. 510.	582. 901. 517.	584. 909. 553.	538. 778. 533.	633. 766. 535.	625. 728. 539.	
•		22140. 27050. 634.	28336. 45487. 544.	29188. 58349. 51.8.	241.65. 58987. 494.	15435. 47150. 420.	7539. 29030. 463.	3617. 12349. 454.	4586. 3795. 455.	11503. 1116. 471.	
•	1301: 1310: 1319:	387. 348.	170. 820. 201. ULSE-PI	188. 1644. 156.	168. 2669. 170. ORRECTE	168. 3277. 167. D DATA.	172. 3270. 161. CORREC	181. 2624. 161. TION =	175. 1621. 177.	244. 821. 178.	
•	פא נד				OKKELIE OKKELIE	CULLER.	CURREL	TEET E	1. 103	رس سوسي	# 3 pm pm/pm

	rr.	TI	ENERGY	HKEH	BKGMD	нинм	CHANNEL LEF	ТРЫ	CTS/SEC	%ERR
-		1 2	511. 07 559. 15	2837. 160025.	9484. 5398.	3. 43 2 72	1022. 55 101 1118. 64 110		4. 728E 00 2. 667E 02	5. 5 8. 3
	3	2	564. 11 602. 78	327552. 91.47.	4820.	2. 31	1128. 55 118	7 35	5. 459E 02	0.2
_	5	1	645. 95	669.	4021. 2636.	2. 44	1.205. 83 119 1.292. 11 128	5 15	1. 524E 01 1. 115E 00	
		1. 1	657. 15 665. 35	17656. 1011.	3175. 2395.		1314. 49 130 1330. 88 132		2. 943E 01 1. 685E 00	

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:09:33 AM \*\*\*\*\*\*<u>\*</u>\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6656, 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABIL

ACQUISITION DATE: 13DEC79 2103:36 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 606. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:#:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL:

0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

:40

#### UNKNOWN SAMPLE REPORT

1

665. 64

114.

201.

ELEMENT		PEA ENER		KGND	AREA	CONCE	NTR.	1 SIGM ERROR		ROR
%-COPPE %-ANTIM %-ARSEN	IONY	511. 564. 657.	2	330.	984. 36066. 1.689.	0. 01 0. 70 0. 18		0. 000 0. 004 0. 006	Ø	5. 8 Ø. 6 3. 4
1009: 1018: 1027:	69. 115. 94.	5 12 8	1. 16	4. 18	4. 190	. 192.	65. 178. 59.		. 101.	
1117: 1126: 1135:		314 541 2	9. 702		7. 5983			472	. 82.	
1301: 1310: 1319:	37.	7 1.	7. <b>1</b> 7 3. <b>1</b>			. 334. . 11.	16. 254. 20. TION =	181. 10	. 75. . 15.	
PK IT	ENER	GY	AREA	BKGND	FWHM	CHANNEL	LEFT F	°W CT	S/SEC	%ERR
1 1 2 2 3 2	510. 559. 564.	50	994. 16273. 36428.	1131. 424. 333.	2.30	1022. 37 1118. 74 1128. 66	1107	20 1.6 36 2.7 36 6.0	12E 01	5. 8 0. 8 0. 5
4 1 5 1	602. 657.		1.123. 1706.	308. 266.		1205. 83 1314. 43		23 1.8 17 2.8		3. 7 2. 8

2.55

1.331. 46 1.324

15 1. 904E-01. 20. 0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:10:42 AM એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ:એ: \* \*\*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220M

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7881. 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 2113:54 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 699. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* MBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: KEY/CHML: 0.5003803

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

1

665, 28

157.

231.

• ELEME	NT 		PEFIK NERGY	BK(	3ND	AREA	CONCE	NTR.	1 SIGMA ERROR	%EI	ROR
%-cop %-ANT %-ARS	YMOMT	!	511. 1 564. 2 657. 2		466.	1240. 42157. 2272.	0. 01: 0. 70: 0. 20:				5. 1 0. 5 3. 1
• 1009 1018 1027		6.	74. 163. 79.	77. 193. 74.	224	. 263.	250.	85. 248. 65.		93. 140. 72.	
	: 294 : 353 : 3	2.	3827. 6186. 32.	4126. 8295. 29.	8662	. 7022.	4298.	491. 1847. 37.	558.	1434. 103. 41.	•
	-	1. 2.	1.05. 21.	223. 14.	14	. 442.		406. 9.	23.	31. 111. 25.	
PK I	T EN	ERGY	FII	REA	BKGND	FWHM	CHANNEL	LEFT F	PW CTS	/SEC	%ERR
1 2 3 4	2 55 2 56	1. 07 9. 21 4. 16 2. 85	20: 42:		1370. 631. 473. 461.	3. 13 2. 29 2. 26 2. 23	1022. 54 1118. 76 1128. 65 1205. 97	1108 1108	18 2. 090 34 3. 390 34 7. 130 23 2. 030	3E 01 2E 01	5. 1. 0. 7 0. 5
5	1 65	z. 00 7. 23 = 00	2	266. 306.	325.	2. 33 2. 33	1314. 64		20 3.84		3. 8 2. 4

2.55

1330. 74 1324

14 2.610E-01 16.0

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220N

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6979,000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:#:

ACQUISITION DATE: 13DEC79 2124:16 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1:

**>** 

يسم جو جدر يعر المراد ا

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8 00

:1:

## \_UNKMOWN SAMPLE REPORT

665, 70

196.

271.

ELEMENT	PEAK ENERGY	BKG	VD I	AREA	CONCE		1 SIGMA ERROR	%EF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 2	50	57. 5	1214. 3468. 2766.			0. 0007 0. 0048 0. 0083		5. 5 0. 5 2. 9
1009: 5 1018: 11 1027: 14		110. 186. 106.	108. 253. 86.	88. 276. 90.	94. 263. 88.	110. 249. 80.	92. 225. 89.	89. 1 <i>66.</i> 84.	
111.7: 37: 1126: 44: 1135: 4		51.80. 1.0248. 30.	4304. 10760. 37.	2817. 8870. 44.	1.362. 5610. 40.	617. 2353. 38.	708. 651. 36.	1754. 143. 41.	
<b>)</b> 1310: 5	.5. 22. 52. 134. \$5. 25. PULSE—PI	21. 263. 20. LE-UP CI	22. 438. 19. ORRECTE	23. 551. 22. D DATA.	542. 24.	17. 442. 18. TION =	30. 305. 19. 1. 019	36. 149. 29.	
PK IT E			SKGND	FWHM	CHANNEL.	LEFT P		'SE:C	%ERR
2 2 5 3 2 5	59. 20       25 54. 17       54	.237. 634. 457. 526.	1650. 754. 578. 437.	3. 08 2. 28 2. 30 2. 39	1.022. 70 1.118. 74 1.128. 66 1.205. 96	1107 1107	18 2.061 33 4.272 33 9.076 17 2.544	E 01 E 01	5. 5 0. 6 0. 4 3. 2
5 1 65		320. 1817.	371.	2. 40 2. 40	1314. 57		16 4.695		3. £ 2. 1

2. 27

1331.58 1325

13 3.267E-01 14.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:13:01 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \* \*\*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02200

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 8125, 000

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. THEIL

UNITS:

ACQUISITION DATE: 13DEC79 2134:39 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC SENSITIVITY: 4.000 ELAPSED REAL TIME: 697. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:40

DETECTOR: GELI-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEV/CHNL: 0.5003803

OFFSET: -0.5932283 KEV \* LIBRARY: NUCL. L1B1

2. 000KY \* HALF LIFE RATIO: 8. 00 \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1

665.37

130.

ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCEN		1 SIGMA ERROR	%ERROR
A-COPPER A-ANTIMONY X-ARSENIC		1587. 403. 234.	1157. 371.25. 1968.	0. 011 0. 600 0. 175	)9	0. 0006 0. 0034 0. 0056	5. 7 Ø. 6 3. 2
• 1009: 1018: 102. 1027: 104.	146. 93.	173. 24 73. 8			228. 61.	167. 58.	136. 65.
1117: 2655. 1126: 3105. 1135: 30.	5539.	3696. 298 7297. 757 14. 1		3768.	449. 1716. 18.		1184. 80. 28.
• 1301: 10. 1310: 41. 1319: 36.	104. 18.	162. 31 13. 1	.2. 359. .0. 11.	388. 11.	16.	224. 15.	10. 91. 16.
PK IT ENER		-UP CORREC A BKGND		CHANNEL			SEC %ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 646. 6 1 657.	20 1791 16 3756 84 117 46 8	3. 588 0. 407 6. 473 5. 374	3. 2. 29 7. 2. 27 6. 2. 22 9. 2. 39	1022, 41 1118, 74 1128, 64 1205, 96 1293, 12 1314, 65	11.09 11.09 11.97 1.284	23 1.950 32 2.986 32 6.260 26 1.961 20 1.409 17 3.319	E 01 0.8 E 01 0.5 E 00 3.9 E-01 34.3

2.45

1.70.

1330.92 1323

14 2.173E-01, 16.7

\*\*\*\*\* 14 DEC 1979 10:14:13 AM Here in the health of the property of the 

<sup>1</sup>91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q220P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8996, 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. THE4.

ACQUISITION DATE: 13DEC79 2145:01 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 673. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 19.

DETECTOR: GELI-8 \* LIBRARY: NUCL, L.1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET:

-0.5932283 KEV \* REUNDANCE LIMIT: 85. 99%

#### UNKNOWN SAMPLE REPORT

1

1.

657.16

665, 40

21770.

1323.

5194.

3091.

• ELEMENT	PEAK ENERGY	PKGI	ND I	AREA	CONCE	NTR.	1 SIGMA ERROR	%E!	RROR
%-COPPER %-ANTIMONY	564. 1	57:	10. <u>3</u> 5:	2878.	5. 169	91	0. 0014 0. 0137		Ø. 3
%-ARSENIC	657. Z	45:	99. 1:	9276.	1. 559	90	0. 0333		2. 1
• 1009: 709 1018: 838 1027: 767	1. 873.	730. 976. 680.	801. 1012. 661.	1102.	1122.	1092.		823.	
1117:26130 1126:31418 1135: 912	). 54297.	34811. 69624. 724.	69752.			14961.	4699.	13904. 1541. 676.	
<b>■</b> 1310: 468 1319: 447	. 223. 3. 1026. 3. 260. PULSE-PI	2046. 222.	3132. 241.	3934. 218.	3883. 208.	3241. 221.	1960. 222.	324. 998. 201.	
PK IT ENE	RGY FI	REA I	BKGND	FWHM	CHANNEL	LEFT F	PW CTS	'SEC	,%ERR
2 2 559 3 2 564		115. 533.	12083. 6951. 6449. 5623.	2. 75 2. 31 2. 31 1. 99	1022, 56 1118, 64 1128, 56 1142, 19	11.07 1107	15 4.58: 35 3.23: 35 6.64:	5E 02 2E 02	6. 3 0. 2 0. 2
	2. 78       1.1 1. 1.7	530.	3623. 6550. 2801. 3637.	2. 38	1142, 13 1205, 83 1248, 59 1292, 14	1194 1243	9 6. 75: 20 1. 92: 10 4. 52: 14 1. 36:	2E 01 4E-01 :	28. 3 1. 4 30. 0 11. 7

2.36

2.33

1314.50 1303

1330.98 1325

21 3.628E 01

13 2.205E 00

0.9

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02200

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8327.000 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:::

UNITS:

ACQUISITION DATE: 13DEC79 2156:28 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

The same of the sa

DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENFRGY TO FRANCE.

'DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

# UNKNOWN SAMPLE REPORT

1

665. 68

243.

277.

ELEMENT	PEAK ENERGY	BKG!	ا D	AREA	CONCE		1 SIGMA ERROR	ZEF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 2	49	97. 5:	1149. 3532. 2803.	0. 01: 0. 84: 0. 24:		0. 0007 0. 0041 0. 0070		5. 9 0. 5 2. 9
1009: 90 1018: 13: 1027: 120	3. 150.	94. 194. 110.	88. 253. 85.	102. 255. 96.	105. 253. 81.	102. 247. 93.	104. 211. 87.	103. 164. 88.	
1117: 3677 1126: 4333 1135: 33	3. 7688.	51.45. 1.0542. 34.	4255. 10931. 32.	2749. 8834. 42.		601. 2383. 33.	634. 672. 42.	1796. 143. 41.	
1301: 20 1310: 6: 1319: 5:	l 123.	1.6. 234. 8. LE-UP C/	20.	19.	574. 12.	16. 465. 16. TTON =	304. 16.	31. 137. 23.	
PK IT ENI			3KGND	FЫНМ	CHANNEL	· = ·		'SEC:	%ERR
2 2 55: 3 2 56: 4 1 69:	9. 20      25 4. 18      54 2. 86        1	432. 580.	1753. 710. 506. 439.	3. 08 2. 27 2. 27 2. 26	1022. 60 1118. 74 1128. 69 1205. 98	1107 1107 1197	19 1. 947 32 4. 200 32 9. 072 18 2. 634	E 01. E 01 E 00	5. 9 0. 7 0. 4 3. 2
	7. 23 2	85ø.	304.	2. 33	1314. 65	1364	21 4.751	E 00	2. 1

2.51.

1331.53 1325

16 4.048E-01 11.7

14 DEC 1979 10:16:36 AM \*\*\*\*\*\*\*\* 

<sup>91119065</sup> QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0220R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7967.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TREA.

ACQUISITION DATE: 13DEC79 2206:50 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 689. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEY/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00

2. 000KV

OFFSET:

-0.5932283 KEV

\* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

657. 25

665, 47

1

2251.

156.

320.

207.

ELEMENT	·	PERK ENERGY	BKG	ND I	AREA	CONCE	VTR.	1 SIGMA ERROR	%EF	ROR
%-COPPE %-ANTIM %-ARSEN	IONY	511. Ø 564. 2 657. 2	4!	52. 4·	1246. 4319. 2218.		26 58 14			5. 2 0. 5 3. 1
1009: 1018: 1027:	86. 131. 118.	71. 147. 93.	90. 207. 92.	78. 224. 69.	76. 257. 81.	254.	88. 221. 71.	205.	101. 126. 80.	
1117: 1126: 1135:		3925. 6493. 32.	4118. 8577. 30.	3494. 8985. 35.	2253. 7469. 35.	4637.	509. 1983. 47.	547.	1465. 128. 36.	
1301: 1310: 1319:	44. 44.		193. 22.	12. 346. 14. ORRECTE	427. 16.	18.	386. 14.	22.	20. 123. 16.	
PK IT	ENER	GY FII	REA !	BKGND	FWHM	CHANNEL	LEFT F	PW CYS/	'SEC	%ERR
1 1 2 2 3 2 4 1	511. : 559. : 564. :	21 20 18 44	989.	1432. 633. 459.	3. 23 2. 29 2. 28	1022. 40 1118. 75 1128. 68	1109 1109	19 2. 108 30 3. 406 30 7. 498	5E 01 3E 01	5. 1 0. 7 0. 5
5 1	602. 646.			391. 390.	2. 32 2. 78	1205, 68 1292, 34		22 2. 133 24 1. 763		3. 6 28. 4

2.31

2. 20

1314.68 1305

1331. 12 1325

20 3.752E 00

12 2.592E-01 15.5

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:17:48 AM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02205

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8139, 000 UNITS:

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 2217:12 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL.. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT:

# UNKNOWN SAMPLE REPORT

657. 20

665. 20

2218.

1.34.

292.

213.

1\_

1.

● ELEMENT	PEFIK ENERGY	BKGND	<u> </u>	7REA	CONCE		1 SIGMA ERROR	ZER	ROR
●%-COPPER ●%-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 2	1355 490 288	. 4.	1086. 4068. 2185.		38 75 31			5. 7 0. 5 3. 1
<ul> <li>1009: 73</li> <li>1018: 118</li> <li>1027: 103</li> </ul>		163.	69. 222. 60.	82. 242. 80.	264.	68. 237. 82.	90. 172. 66.	114. 124. 81.	
1117: 2825 1126: 3494 1135: 27	. 6522.	8498.	3392. 8821. 25.	2199. 7357. 32.		497. 1976. 25.		1468. 93. 40.	
• 1301: 23 • 1310: 47 1319: 43	'. 89.	230. 14.	14.	404. 19.	25.	358. <b>15</b> .	27. 233. 14. 1. 015	29. 96. 11.	
PK IT ENE	RGY AR	ER BK	GND	FWHM	CHANNEL	LEFT F	W CTS/	SEC	%ERR
<ul> <li>1 1 51.1</li> <li>2 2 559</li> <li>3 2 564</li> <li>4 1 602</li> </ul>	. 22 1.98 . 1.8 447	80. 34.	498.	2. 81 2. 25 2. 30 2. 37	1.022.53 111.8.77 1128.69 1205.82	1108 1108	18 1.837 36 3.313 36 7.456 22 2.298	E 01 E 01	5. 7 0. 7 0. 5 3. 3
5 1 614	. 98		282.	2. 90	1230, 20		15 8.019		51 8

2. 39

2. 33

1314.59 1305

1330.58 1327

18 3.697E 00

12 2.227E-01 17.8

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0220T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11369.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

Жc

ACQUISITION DATE: 13DEC79 2227:35 \* FWHM(1332) 2.390
PRESET TIME(LIVE): .600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

# Market by Arma Market

DETECTOR: GELI-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:40

#### UNKNOWN SAMPLE REPORT

ELEMENT	PERK ENERGY B	KGND	AREA	CONCENTR	1 SIGN	
%-COPPER • %-ANTIMONY %-ARSENIC	564. 2	597. 5		0. 0116 0. 6646 0. 1902		31 0.5
• 1009: 114. 1018: 146. 1027: 132.		6. 91. 7. 275. 4. 93.				L. 198.
1117: 3723. 1126: 4589. 1135: 50.	5078. 531 8397. 1.108 48. 3	3. 11506.	9492.	5995. 2	651. 687 2563. 739 51. 44	<del>)</del> . 138.
● 1310: 47. 1319: 60.			577. 20.	21.	495. 267 16. 9	7. 174. 9. 28.
PK IT ENER	GY AREA	BKGND	FЫНМ	CHANNEL LE	EFT PW C1	TS/SEC XERR
• 1 1 511. 2 2 559.	22 2641.6.	1628. 866.	2. 97 2. 28	1022.58 10 1118.77 11	· · · · · · · · · · · · · · · · · · ·	

	1 14	~ ,	had 411% % 1	I II CELTI	DIVIDIAN	i. Millin	CHICIMMEL LEFT	PW CIS/SEC	<b>WELKIK</b>
-			511. 08	1.639.	1628.		1022.58 1015		4. 3
			559. 22	2641.6.	866.	2. 28	1118.77 1109	30 4.403E 01	Ø. 6
_	3	2	564. 17	57964.	608.	2. 28	1128.68 1109	30 9.661E 01.	0.4
	4	1.	602. 88	1.703.	649.	2. 32	1206.03 1195	25 2.838E 00	3. 2
	5	:1_	647. 07	193.	469.	5. 25	1294. 35 1286	16 3.214E-01	17. 6
_	6	1	657. 19	2971.	463.	2. 34	1314.57 1305	20 4.952E 00	2. 1
•	11.0	1.	665. 46	266.	322.	2. 78	1331.09 1325	16 4.426E-01.	11. 5

\* 14 DEC 1979 10:20:11 FM dedededededededededededededededede \* \*\*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 14729, 00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 13DEC79 2238:00 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 709. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 1.0.

:44

DETECTOR: GELI-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEV/CHNL: 0.5003803

2. 000KV \* HALF LIFE RATIO: 8. 99 -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

\* LIBRARY: NUCL. LIB1

# UNKNOWN SAMPLE REPORT

OFFSET:

1.

1

657.13

665, 38

32001.

2049.

10136.

6010.

ELEMENT	PEAK ENERGY	BKGND	RREA	CONCEN		1 SIGMR ERROR	%ERROR
X-COPPER X-ANTIMONY . X-ARSENIC	564. <i>1</i> .	10097. 5	03931.	4. 551	2	0.0113	0.2
• 1009: 1186. 1018: 1113. 1027: 1175.		.305. 1351	. 1034. . 1397. . 1015.	1457.	1124. 1334. 971.	1211.	1162.
1117:37739. 1126:47494. 1135: 1763.	79756. 99	9432. 39513 9679. 98596 .486. 1287	. 78697.	12277. 47663. 1222.	20737.	6823.	2646.
● 1310: 758. 1319: 698.	1562. 3 472.	407. 427 3007. 4508 440. 414 -UP CORRECT	. 5719. . 401.	5521. 397.	4369. 363.	2816. 409.	1369.
	GY FIRE			CHANNEL			'SEC %ERR
1 1 510. 2 2 559. 3 2 564. 4 1 571. 5 1 602. 6 1 645.	12 289196 08 604323 75 363 76 17163	5. 12557. 2. 12109. L. 14144. 2. 11210.	2. 32 2. 33 1. 61	1022. 17 1118. 58 1128. 49 1143. 82 1205. 78 1292. 09	1108 1108 1140 1198	16 4 670 33 4 820 33 1 007 11 6 021 16 2 860 13 2 056	0E 02 0.2 °E 03 0.1 LE-01 51.3

2. 33

2, 66

1314.44 1.303

1330.92 1325

21

5. 333E 01

13 3.416E 00

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9445.000 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

UNITS:

ACQUISITION DATE: 13DEC79 2250:03 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

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and sorp a prior, give, give,

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOFRANCE:

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:10

#### UNKNOWN SAMPLE REPORT

1.

1

657, 24

665.56

3900.

307.

710.

434.

ELEMENT	******	PEAK ENERG	۲' BK(	GMD	FIREA	CONCE	VTR.	1 SIGMA ERROR	ZER	ROR
%-COPPE %-ANTIM	ONY	511. 564.	2 8	3 <b>3</b> 1. 7	1444. '5615.	1. 067	28 71	ø. øø45		5. 9 0. 4
%-ARSEN	TÜ	657.	£. (	o94.	381.0.	0. 301	1.9	0. 0082		2. 7
1009:	150.	123	. 142.	140.	130.	153.	158.	141.	148.	
1018:	197.	216	. 247.	322.	392.	324.	338.	272.	212.	
1027:	199.	163	. 148.	127.	134.		124.		120.	
111.7:	5011.	691.3	. 7124.	6198.	4179.	1892.	867.	922.	2495.	
1126:	6120.	10941	. 14680.	15330.	12856.	8001.	3408.	960.	210.	
1135:	74.	57	. 39.	57.	55.	75.	54.		63.	
1301:	34.	31	. 51.	40.	29.	33.	36.	38.	44.	
1310:	75.	154	. 333.	630.	713.		645.		189.	
1319:	69.	36			33.		23.		35.	
•	P	ULSE-P	ILE-UP (	CORRECTE	D DATA.	CORREC	rion =			
PK IT	ENER	GY	AREA	EKGND	FWHM	CHANNEL	LEFT F	°W CTS∕	'SEC	ZERR
1 1	511.	11	1478.	2886.	2. 92	1022. 63	1012	21 2.464	E 00	5. 8
2 2 3 2	559.	23 3	6108.	1244.	2. 29	1118.79	1110	29 6. 01.8	E 01	0.6
	564.	19 7	7400.	851	2. 28	1128.70	1110	29 1. 290		0.4
	602.		2272.	654.	2. 32	1206. 1.0	1197	18 3.787	'E 00	2. 7
5 1	645.	95	208.	373.	2. 82	1.292, 11	1287	13 3, 465	6E-01. 1	L5. Ø

2. 32

2.45

1314.66 1304

1331.30 1324

19 6.499E 00 1.9

16 5.112E-01 1.1.3

9111.9065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0221C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9836,000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 13DEC79 2300:29 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

KEV/CHNL: 0.5003803 OFFSET: -0.5932283 KEV

0.5003803 \* HALF LIFE RATIO: 8.00 -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

2. 000KV

4:

## UNKNOWN SAMPLE REPORT

1

1

657. 20

665.37

2337.

204.

296.

195.

ELEMENT	PEAK ENERGY	EKGND	<u>H</u>	REFI	CONCE		1. SIGMA ERROR	ZER	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 2	2100. 525. 292.	46	.619. 841. 302.	0. 013 0. 635 0. 176		0. 0007 0. 0032 0. 0054		4. 8 0. 5 3. 0
• 1009: 83. 1018: 137. 1027: 133.	83. 194. 112.	86. 240. 1.02.	93. 279. 80.	92. 307. 75.	99. 289. 77.	107. 278. 71.	87. 245. 70.	11.9. 194. 82.	
1117: 3063. 1126: 3642. 1135: 40.		9161 9	3673. 9589. 33.	2478. 8095. 27.	1203. 4958. 27.	576. 2117. 34.	592. 605. 37.	1.516. 128. 33.	
1301: 12. 1310: 42. 1319: 54.	113.	14. 222. 17. :-UP CORF	344. 17.	35. 480. 12. DATA.	419. 17.	21. 369. 13. FION =	20. 256. 6. 1. 015	33. 129. 17.	
PK IT ENER	CGY ARE	A BKO	3ND	FЫНМ	CHANNEL	LEFT P	W CTS/	SEC	%ERR
<ul><li>1 1 51.1.</li><li>2 2 559.</li><li>3 2 564.</li></ul>	22 2162	24. 6	578.	3. 46 2. 33 2. 25	1022, 53 1118, 79 1128, 72	1108	25 2. 740 36 3. 604 36 7. 925	E 01	4. 7 0. 7 0. 5
• 4 1. 602. 5 1. 645.	50 16	'7. 19 38. 2		2. 30 3. 97	1205. 92 1291. 21	1194	36 2. 295 1.5 2. 798	E 00	4. 3 5. 5

2.43

2.17

1314.58 1307

1330.92 1326

16 3.895E 00

16 3.397E-01 12.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:23:50 AM \*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0221D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11009,00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 13DEC79 2310:51 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 61.0. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 19.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

1.

657. 22

2452.

906.

ELEMENT	PEAK ENERGY	BKGND	FIREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER M-ANTIMONY M-ARSENIC	564. 2	637.		0. 0125 0. 6289 0. 1654	0. 0031	5. Ø Ø. 5 3. 3
1009: 91 1018: 126 1027: 147	. 204.	109. 80 278. 304 94. 94	. 315.	328. 309	3. 117. 9. 243. 3. 101.	
1117: 3038 1126: 4140 1135: 43	). 7609. <u>1.</u> 0	1665. 3876 3106. 10459 33. 37	. 8683.		3. 661.	1604. 139. 39.
1319: 47	5. 112. 7. 1.9.	15. 23 223. 377 15. 14 -UP CORRECT	. 510. . 14.	24. 2: 538. 40: 10. 1: CORRECTION:	7. 280. 5. 12.	31. 134. 23.
•	RGY ARE		<b>Г</b> ЫНМ	CHANNEL LEFT		SEC %ERR
2 2 559 _ 3 2 564	), 99 — 1631 2, 24 — 22511 3, 18 — 5262;	7. 881.	3. 29 2. 26 2. 28	1022.39 1011 1118.81 1110 1128.69 1110	32 3. 753	E 01 0.7
<ul><li>4 1. 602</li><li>5 1. 645</li></ul>	?. 94		2. 27 2. 83	1206.16 1197 1291.52 1282		E 00 3.2

2. 24

1314.63 1305

27 4.086E 00

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0221E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11477.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**†**:

ACQUISITION DATE: 13DEC79 2321:13 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 19.

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**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:#:

#### . UNKNOWN SAMPLE REPORT

1

665.46

487.

805.

ELEMENT	PEAK ENERGY	BKGN	ID f	AREA	CONCE	ITR.	1 SIGMA ERROR	%EF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 2 657. 2	485 160 116	3. 146	2296. 5420. 7309.	1. 709	•••	0. 0008 0. 0057 0. 0114		4. 8 0. 3 2. 4
• 1009: 275. 1018: 326. 1027: 340.	259. 41.6. 285.	241. 481. 279.	254. 578. 252.	282. 586. 274.	266. 615. 281.	276. 571. 245.	298. 454. 247.	297. 389. 237.	
1117: 9626. 1126:12107. 1135: 194.			1.1.390. 29541. 150.	7343. 24478. 129.	3665. 15287. 154.	1714. 6624. 146.	1908.	4913. 464. 142.	
1301: 62. 1310: 165. 1319: 164.		71. 708. 59. F-UP CO	75. 1154. 62. IRRECTE	73. 1469. 60.	57.	77. 1208. 56.	57.	98. 367. 66.	
PK IT ENER			KGND	FЫНМ	CHAMNEL			SEC	%ERR
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	20 694: 1.7 1536	15. 71.	5090. 2131. 1682.	3. 99 2. 39 2. 28	1022.38 1118.74 1128.67	1107 1107	19 4.017 33 1.157 33 2.561	E 02	4. 8 0. 4 0. 3
4 1 602. 5 1 646. 6 1 657.	13 3	25.	2132. 866. 1218.	2. 37 2. 19 2. 35	1205. 90 1292. 46 1314. 60	1286	27 7. 543 13 5. 421 18 1. 278	E-01 1	2. 1 l4. 3 1. 3

2. 31

1331.09 1325

13 8.109E-01

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11403.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ж:

ACQUISITION DATE: 13DEC79 2331:56 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

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**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

# UNKNOWN SAMPLE REPORT

1.

1.

657. 23

665, 66

4887.

473.

759.

471.

ELEMENT	PEAK ENERGY	, BKGI	ND I	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMON %-ARSENIC		11:	26. 9	1830. 2542. 4742.		39 98 71		4. 9 0. 4 2. 6
1018: 2	81. 152. 27. 270. 24. 170.	187. 318. 181.	181. 419. 160.	174. 412. 159.	397.	381.		200. 287.
1117: 61: 1126: 74 1135:			7480. 18838. 59.	4846. 15614. 71.	9698.	1057. 4300. 71.	1110. 1231. 80.	3049. 278. 91
1310:	29. 38. 99. 190. 21. 37. PULSE-P1	399. 34.	25.	50. 954. 34. D DATA.	1029. 26.	53. 821. 29. FION =	32.	59. 241. 33.
PK IT E			BKGND	FЫНМ	CHANNEL			SEC XERR
2 2 5 3 2 5	59. 22	L885. 101.3. 5360.	3142. 1450. 1160.	3. 33 2. 28 2. 26	1022. 56 1118. 77 1128. 69	1108 1108	19 3.142 36 7.336 36 1.589	E 01 0.5 E 02 0.3
		2784. - 2:49.	1036. 479.	2. 34 2. 39	1206. 01 1292. 81		20 4.640 13 4.144	

2. 24

3.43

1314.66 1306

1331. 49 1325

19 8.145E 00

15 7.890E-01

1. 7

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0221G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11900.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NRME: EFF. TRB1

:|-

ACQUISITION DATE: 13DEC79 2342:27 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4:

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DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:86 \* FNFRGY TOLFRANCE:

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

## UNKNOWN SAMPLE REPORT

1.

1

657. 21.

665.44

2837.

196.

367.

292.

ELEMENT	PERK ENERGY	BKGND	FI.	REA	CONCE	ITR.	1 SIGMA ERROR	ZEF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 2		55		Ø. 633		0. 0005 0. 0030 0. 0052		4. 9 0. 5 2. 9
1009: 83 1018: 149 1027: 157	. 116. . 196.	109. 234. 97.	101. 291.	1.01. 343.	121.		104. 249.	138. 174. 88.	
1117: 3591 1126: 4538 1135: 48	. 8094. 1	l.0843. 1:	4499. 1409. 40.	2901. 9340. 31.	1.398. 5991. 43.	651. 2607. 39.	748.	1749. 135. 59.	
1310: 73 1319: 57	. 28.	19. 268. 21.	414. 20.	573. 21.	20.	495. 22.			
PK IT ENE	PULSEP1LE RGY ARE				CORRECT			'SEC	%ERR
1 1 511 2 2 559 3 2 564 4 1 571	. 19 570:	31. 10.	796. 586.	2. 28	1022, 57 1118, 79 1128, 70	1108 1108	19 2. 534 33 4. 31.4 33 9. 502	E 01 E 01	4. 9 0. 6 0. 4
5 1. 602	. 87 17: . 71 1:	37.	379.		1143. 42 1206. 01 1291 62	1198	10 2.086 16 2.894 26 2.559	E 00	23. 3 2. 9 23. 1

2. 27

2.97

1314. 61 1306

1331.05 1323

18 4.728E 00

14 3.266E-01 14.4

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0221H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11984.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NRME: EFF. YAB1

:4:

ACQUISITION DATE: 13DEC79 2352:53 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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#### UNKNOWN SAMPLE REPORT

645.95

657. 21

665.42

5

5

246.

209.

3053.

275.

205.

185.

•	ELEMEN	ΙΥ		EAK ERGY	ВКС	iND	RREA	CC	NCEM	VTR.		GIGMA ROR		RROR
•	%-COPF %-ANT) %-ARSE	MONY	5	64. 2	21 4 2	¥ <b>7</b> 5.	1342. 60172. 2992.	ę	), 676	99 57 21	Ø.	0006 0031. 0053		
•	1009 1018 1027	149	•		106. 242. 97.	280	3. 10 3. 30 9. 11	4. 3		280	i.	1.02. 263. 92.		•
•		3788 4806 51.	. 8	690.		1216	1. 309 5. 1000 3. 4		511.	666 2826 33	<b>.</b>			•
•	1301: 1310: 1319:	43 54	•	1.36. 26.	262. 23.	47: 10	3. 3 3. 62 3. 2 TED DAT	5. € 5.	526. 12.	509	·.	25. 31.9. 1.8. 020	151 31	•
•	PK I			Al		BKGND				LEFT				%ERR
•	2 2 3 2 4 :	L 511 2 559 2 564 3 602	. 23 . 19 . 82	61: 13	466. 387. 791.	2156. 701. 484. 218.	2. 29	1118 1128	3. 79 3. 71	101.2 1108 1108 1196	30 30	4. 57: 1. 02:		5. 6 Ø. 6 Ø. 4 2. 7
	5 :	3 608	. 87		93.	166.	. 1.91	1.217	7. 99	1196	27	1. 54	8E-01	22. 4

4. 13

2.26

2.16

1292. 10 1286

1314.61 1306

1331.. 01 1306

13 4.097E-01 11.6

39 3.477E-01 11.6

1.9

39 5.088E 00

\* 14 DEC 1979 10:29:55 RM \*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY:

14558.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 14DEC79 3:19 \* FWHM(1332) 2.390 PRESET TIME(LIVE): *600.* SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIE1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLFRANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

3

3

657.21

665. 54

6319.

376.

531.

369.

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		1 SIGMA ERROR	%ERI	ROR
2-COPPER 2-ANTIMONY 2-ARSENIC	564. 2	1494. 12	22450.	1. 135	i8		1	4. 8 0. 4 2. 4
• 1009: 236. 1018: 290. 1027: 259.		225. 227. 409. 492. 244. 226.	522.	555.	213. 509. 215.	249. 433. 208.	257. 363. 210.	
1117: 7990. 1126: 9952. 1135: 153.	17924. 23	.234. 9786. 896. 24820. 120. 114.	20676.	12855.	1393. 5582. 113.	1603. 1606. 115.	4014. 359. 125.	
1319: 99.	266. 66.	583. 969. 43. 54.	1232. 41.	1301. 49.	1051. 40.	69. 659. 41.	72. 301. 47.	
PK IT ENER		-UP CORRECTE BKGND	FWHM			1.041 W CTS/:	5EC	%ERR
<ul><li>1 1 511.</li><li>2 2 559.</li><li>3 2 564.</li><li>4 1 572.</li></ul>	22 57669 18 127447	3. 1953. 7. 1555.	3. Ø4 2. 28 2. 27 1. 32	1022.68 1118.78 1128.68 1145.00	1108 1108	19 3. 720 35 9. 610 35 2. 124 10 4. 172	E 01 E 02	4. 7 0. 4 0. 3 ***
5 1. 602. 6 1. 645.	85 3906	5. 1617.	2. 27 2. 25	1205. 97 1292. 11	1194	28 6. 510 11 3. 824	E 00	2. 2

2. 27

1.87

1314.61 1307

1331. 26 1307

34 1.053E 01.

34 6.273E--01

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12918.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

:+:

:k

:4:

ACQUISITION DATE: 1.4DEC79 13:57 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

1.

665, 55

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		SIGMA RROR	%ERROR	
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2	710. 5		0. 0129 0. 6060 0. 1709	0	. 0005 . 0028 . 0049	4. 2 0. 5 2. 9	
• 1009: 125. 1018: 186. 1027: 172.	201.	97. 96. 269. 328. 113. 102.	102. 362. 103.			122. 293. 89.	147. 223. 99.	
1117: 3540. 1126: 4639. 1135: 58.	- · · · · · · · · · · · · · · · · · · ·	205. 4573. 247. 11712. 35. 40.	9846.	6171.	681. 2596. 41.	724. 781. 50.	1811. 141. 56.	
1301: 20. 1310: 68. 1319: 60.	119. 29.	22. 23. 242. 431. 17. 17. UP CORRECTE	595. 22.	569. 19.	507. 26.	25. 300. 22. . 019	39. 155. 26.	
PK IT ENER			БИНМ 	CHANNEL L			EC ZERF	ĕ
1 1 511. 2 2 559. 3 2 564. 4 1 602.	<ul><li>24 251.72</li><li>1.9 58934</li></ul>	. 994. . 723.	3. 08 2. 24 2. 27 2. 21.	1022.67 1 1118.81 1 1128.70 1 1206.08 1	110 32 110 32		01. 0.7 01. 0.4	
5 1 646. 6 1 657.	61 216 24 2895	. 364.	4. 33 2. 27	1293. 43 1 1314. 67 1	281 21		01 14.3	

327.

2.07

1331. 27 1.326

12 2.1.71E-01 21.7

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 0221K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.2496.00

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

UNITS:

ACQUISITION DATE: 14DEC79 24:20 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4

**>** 

**\*\*\*** 

DETECTOR: GEL I-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

# UNKNOWN SAMPLE REPORT

657. 24

665. 38

1

3290.

273.

452.

276.

ELEMENT	PEAK ENERGY	BKGNI	<u> </u>	AREA	CONCE		1. SIGMA ERROR	XER	ROR
%-COPPER %-ANTIMONY %-ARSENIC	510. 9 564. 2 657. 2	2277 667 443	7. 6	1738. 8126. 3219.		27 39 1.0			4. 6 0. 4 2. 8
• 1009: 98 1018: 166 1027: 173	. 247.	117. 250. 140.	119. 320. 112.	117. 379. 109.	328.	303.	151. 254. 83.	157. 209. 114.	
1117: 4168 1126: 5455 1135: 76	. 9799. :	13320. :	5134. 13968. 45.	3421. 11643. 40.		750. 3051. 51.		2071. 181. 48.	
1319: 74	. 154.	256. 16.	34. 481. 28. RRECTE	26.	628. 25.	21. 557. 17. (ION =		41. 191. 37.	
PK IT ENE	RGY AR	EA BI	KGND	FWHM	CHANNEL.			SEC	%ERR
2 2 559 3 2 564 • 4 1 602	), 95 17 ), 23 300 ), 19 696 ), 85 20	55. 18. 67.	2327. 916. 682. 639.	2. 23	1022. 30 1118. 79 1128. 71 1205. 97	1108 1108 1194	22 2.960 33 5.009 33 1.160 20 3.444	E 01 E 02 E 00	4. 6 0. 6 0. 4 2. 8
5 1. 645	i. 89 1:	ರ್ಷ.	617.	3. 18	1291 98	1284	23 3.045	E-01 2	20. 8

2. 32

2.83

1314.67 1307

1330.92 1325

17 5.483E 00

13 4.548E-01 10.6

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:33:30 FM \*\*\*\*\*\*\*\*\*\*\*\*\* \*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 14801.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 14DEC79 34:46 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 61.2. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEV/CHML: 0.5003803

\* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

2. 000KV

# UNKNOWN SAMPLE REPORT

3

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657. 22

665, 70

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220.

ELEMI	EN.I			'EAK IERGY	BKG	IND	AREA	CONCE	VTR.	1 5) ERF		ZEF	RROR
%-COI %-AN	TIP	10NY	Ë	511. 1. 564. 2	6	85. 6	1631. 1671.	ø. 565		0. 0			4. 7 Ø. 5
%-AR	ntil.	ATC.	1	57. 2	1	.89.	2928.	0. 1.5	50	0. 9	1043		2. 8
100: 101:		92. 450		125.	121.		120.		122.		.56.	122.	
102		159. 170.		210. 134.	267. 117.	308. 103.	368. 108.		325. 100.		278. 98.	191. 106.	
		3780.	Ę	5231.	5502.	4784.	2979.	1538.	660.	-	²1.0.	1947.	
112 113		4901. 51.		863. 45.	11860. 37.	12817. 25.	10416. 32.		2836. 43.		756. 55.	167. 47.	
									*****			,	
130:	•	21		17.	29.		23.		21.		38.	31.	
131		60.			254.		611.		494.		X02.	151.	
131:	12 I	51. F	'ULS	23. E-PII	21. _E-UP C	22. ORRECTE	21. D DATA.		17. - TION		25. 120	18.	
PK	rr	ENER	:GY	Al	REA	BKGND	FWHM	CHRINNEL	LEFT F	эμ	CTS/	'SEC	%ERR
1	1	511.			564.	2093.	2. 88	1022. 58		19 3	2. 773	E 00	4. 6
2	2	559.				900.	2. 25	1118.80			1. 518		0. 6
3	2	564.			316.	699.	2. 26	11.28. 72			L. 049		0.4
4	1.	602.		1.		482.	2. 22	1205. 93			3. 148		2. 9
5	1.	645.	22		267.	293.	4. 33	1292, 18	1287	14 4	1. 449	9E-01 :	11. 0

2. 18

2. 62

1314.63 1304

1331.57 1304

37 4.978E 00

37 3.726E-01 11.6

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221M

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9552.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:#:

:4:

ACQUISITION DATE: 14DEC79 45:13 \* FWHM(1332) 2.390 PRESET TIME(LIVE): *600.* SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

3

665.35

201.

149.

3.00

1330.87 1304

37 3.354E-01 11.2

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		SIGMA RROR	%ERRO	IR 
X-COPPER M-ANTIMONY X-ARSENIC		692. 4	1040. 4619. 2180.	0. 6354	· e	), 0006 ), 0033 ), 0054	6. 0. 3.	5
• 1009: 86. 1018: 112. 1027: 104.	148. 1	95. 82. 81. 207. 77. 83.	82. 240. 74.	269.	90. 209. 68.		93. 144. 64.	
1117: 2781. 1126: 3539. 1135: 39.	6446. 88	62. 3512. 26. 9197. 25. 32.	2278. 7757. 21.	4645.	2096.	532. 560. 34.	1432. 106. 22.	
1319: 48.	93. 1	12. 8.	16.	458. 16.	373. 20.	24.	43. 113. 16.	
PK IT ENER		BKGND	FWHM	CORRECTI	-	. 015 CTS/S	EC %E	ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602.	24 19958. 19 45294.	1453. 845. 702.	2. 85 2. 24 2. 24	1022.49 1 1118.81 1 1128.71 1	.109 56 .109 56	3. 326E 7. 549E	01 0. 01 0.	7 5
5 1 645. 6 3 657.	62 189.	370. 240. 11.9.	2. 38 3. 1.4 2. 23	1205. 91. 1 1291. 44. 1 131.4. 60. 1	.284 15		-01 1.3.	8

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221N

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9932.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

:4:

ACQUISITION DATE: 14DEC79 55:35 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

## UNKNOWN SAMPLE REPORT

657, 23

665. 53

2452.

128.

356.

201.

1

ELEMENT	PEAK ENERGY	BKGND	<u></u> f	REA	CONCE	√7R.	1 SIGMA ERROR	%ER	ROR
%-COPPER %-ANTIMON %-ARSENIC	511. 1  Y 564. 2 : 657. 2		. 48	L068. 3287. 2412.		31 26 20	and a succession of		7. 0 0. 5 3. 0
1018: 1	77. 82. 19. 146. 23. 1.06.	200.		98. 249. 99.		98. 233. 77.	206.	97. 159. 74.	
_	923. 4159. 970. 6960. 38. 28.	9299.	3745. 9931. 30.	2464. 8202. 31.	1142. 5219. 26.	489. 2188. 30.		1453. 131. 35.	
<b>1310</b> :	18. 22. 43. 82. 46. 25. PULSE-PII	16. 235. 14. LE-UP COR	17.	456. 15.	31. 451. 21. CORRECT	428. 16.	16.	24. 116. 16.	
PK IT E			GND	FЫНМ	CHANNEL			SEC	%ERR
2 2 5 3 2 5 4 1 6	559, 24	308. 099. 478.	245. 724. 546. 470.	2. 93 2. 22 2. 27 2. 33 2. 34	1128. 72 1.206. 08	1108 1108 1196	24 1. 811 35 3. 551 35 8. 183 21 2. 464	E 01 E 01 E 00	6. 9 0. 7 0. 5 3. 4
<ul><li>3 2 5</li><li>4 1 6</li></ul>	564. 20        491 502. 90	099. 478.	546.	2. 27	1128. 72	1108 1196	35 8. 183	E 01 E 00	0.5

2.42

1.96

1314.65 1303

1331. 23 1327

20 4.087E 00

11 2.128E-01 18.2

\*\*\*\*\*\* 14 DEC 1979 10:37:06 AM \*\*\*\*\*\*\*\*\*\*\* \*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02210

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 15000.00 UNITS:

● SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 14DEC:79 105:58 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

665.63

194.

399.

ELEMENT		PEAK NERGY	ekgr	AD (	PREA	CONCE	/TR.	1 SI ERR		%ER	ROR
%-COPPER %-ANTIMON %-ARSENIO	4Y 5	564. 2	72		5318.	0. 013 0. 603 0. 169		0.0	005 027 048		4. Ø Ø. 4 2. 8
1018: 1	L41. L81 L81.	128. 270. 174.	145. 338. 109.	392.	122. 465. 11.4.		124. 389. 122.	3	31. 32. 18.	158. 234. 117.	
1117: 40 1126: 51 1135:	L47. 9		5923. 3054. 59.		3413. 11158. 44.	7082.	673. 3085. 45.	8	35. 2 29. 63.	2049. 169. 54.	
1301: 1310: 1319:	50. 59.	129. 38.	27. 290. 18.		647. 15.	25.	569. 24.		58. 24.	26. 164. 26.	
PK IT E	roc. ENERGY	ARE		JKKELO I EI BKGND		CHANNEL			22 CTS/SE	EC	%ERR
2 2 5	511. 01 559. 24 564. 19	2957 6777	7. 0.	2613. 930. 741.	3. 05 2. 30 2. 23	1022. 43 1118. 81 1128. 71	1.108 1.108	35 4 35 1	. 681E . 929E . 130E	01 02	3. 9 0. 6 0. 4
5 1. 6 6 1. 6	502, 89 546, 11 557, 25	197 14 327	5.	572. 754. 497.		1206. 05 1292. 43 1314. 69	1283	24 2	. 295E . 422E- . 453E	-01 S	2. 9 28. 3 2. 0

2. 29

1331. 43 1325

15 3.227E-01 16.4

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9436.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**}**:

ACQUISITION DATE: 14DEC79 116:23 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 609. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1:

## UNKNOWN SAMPLE REPORT

1.

665.60

191.

140.

•	ELEM	IENT			PEAK NERGY	BK	GMD		REA	cor	(CE)	YTR.		SIGMA RROR		ERR(	DR 
•	%-CO A-%' A-AR	11TI	10NY	5	511. 1. 564. 2 557. 3	ź		46	115. 923. 169.	Ø.			Ø.	0007 0035 0057			5
•	100 101 102	.8:	87. 110. 114.		78. 131. 108.	79. 193. 91.	. 2	86. 13. 77.	97. 247. 78.	26	31. 57. 52.	92 219 76	١.	103. 180. 71.	11 14 7	1.	
•		:6:	2867. 3683. 40.	ŧ	3845. 6725. 31.	4145. 91.53. 25.	95	07. 62. 26.	2362. 7899. 32.	515	50.	51.4 21.70 20	١.	554. 618. 27.	142 12 3	8.	
•	130 131 131	.0:	31. 50.			13. 207. 17. E-UP 1	. <b>3</b>	16. 16.	405. 21.	3	43. 1.5.	22 395 11 TION =	i. 	19. 224. 16. 015	11	7. 6. 1.	
	PK	IT	ENER	RGY	FIRI	EΑ	BKGN	ID	FWHM	CHAN	VEL	LEFT	РШ	CTS.	/SEC	%E	ERR
•	1 2 3 4 5	1. 2 1. 1.	511. 559. 564. 602. 657.	23 20 94	201: 476: 14:	63. 32. 99.	164 72 50 34 30	:3. 1. :0.	2. 86 2. 28 2. 27 2. 52 2. 37	1118. 1128. 1206.	80 72 14	1011 1109 1109 1197 1307	31 31 20	1. 88' 3. 36: 7. 93: 2. 49: 3. 67	1E 01 9E 01 8E 00	9. 9. 3.	97514
						ma											•

3.10

1331.38 1325

12 3.189E-01 11.4

▶91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02210

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11910.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 14DEC79 126:46 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4:

#### UNKNOWN SAMPLE REPORT

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1.

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645.88

657.26

665, 58

1.41.

201.

3009.

522.

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251.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTI	1 SI R. ERR		RROR
%-COPPER • %-ANTIMONY %-ARSENIC	511. 1. 564. 2 657. 3	1484. 506. 395.	1.586. 59379. 2955.	0. 01.28 0. 6832 0. 1989	0. 0	1886 1832 1857	4. 3 Ø. 5
• 1009: 117. 1018: 151.	113. 194.	82.	115. 127. 296. 293.	102.	90. 1	.26. 112. !56. 182.	
1117: 3711. 1126: 4615. 1135: 54.	8513. 1		546. 2996. 252. 10152. 45. 38.	6384.	<mark>2729. 7</mark>	'44. 1782. '00. 161. 45. 49.	
<ul><li>1310: 51.</li><li>1319: 38.</li></ul>		23.	479. 558. 22. 20.		518. 3 23.	37. 152. 15. 20.	
PK IT ENE	RGY ARE			CHANNEL LI		as CTS/SEC	%ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602.	. 24	14. 6 77. 5	15. 2.25 <sup>°</sup>	1022.51 1: 1118.81 1: 1128.73 1: 1205.97 1:	108 34 4 108 34 1	2.693E 00 3.407E 01 008E 02 2.941E 00	4.3 0.6 0.4 3.1

2.19

2.31

2.57

1291.. 96 1286

1314.70 1307

1331. 33 1326

19 2.350F-01 24.6

12 3.352E-01.13.3

2. 1

17 5.015E 00

**9**111.9065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9925.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 14DEC79 137:12 \* FWHM(1332) 2.390 PRESET TIME(LIVE): *600.* SEC \* SENSITIVITY: 4.000 'ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKMOWN SAMPLE REPORT

665, 29

202.

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ERR.
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ī. ). ).

2.51

1330.76 1307

34 3.374E-01 13.5

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:41:46 RM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: 02215

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12933.00 UNITS:

-0.5932283 KEV

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TRB1

ACQUISITION DATE: 14DEC79 147:39 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET:

\* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

657. 21

665, 56

1.

2922.

229.

431.

333.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	516.		0. 012 0. 618 0. 179	9 :	0. 0029	
• 1009: 114. 1018: 143. 1027: 160.	200.	96. 84 246. 298 108. 113	8. 343.	366.	326.	119. 265. 83.	135. 196. 113.
1117: 3561. 1126: 4364. 1135: 50.	8491. 1:	5462. 466: 1480. 1184: 23. 39	9. 9781.	6276.	660. 2782. 45.		
• 1301: 25. 1310: 59. 1319: 64.	125. 27.	22. 28 241. 449 19. 20 -UP CORRECT	9. <b>61</b> 9. 3. 19.	569. <b>1</b> 6.	505. 16.	31. 293. 31. 1. 019	37. 144. 25.
PK IT ENER				CHANNEL			SEC ZERR
<ul> <li>1 1. 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	19 5927	5. 733.	2. 25 2. 25	1022. 63 1118. 82 1128. 72 1205. 95	1108 3: 1108 3:		E 01 0.6 E 01 0.4
5 1 646.			3. 20	1292. 93		7 2. 040	

2. 25

2.19

1.314. 61 1305

1331. 29 1324

19 4.869E 00

17 3.810E-01 13.2

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: Q221T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10789.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 14DEC79 158:05 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF L1FE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

657. 26

665, 52

5

2399.

1.88.

220.

256.

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT	1 SI R. ERF		RROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	454.		0. 6597	Ø. 9	3006 3032 3053	4. 7 0. 5 3. 0
1018: 127.	182.	87. : 205. 2 102. :	66. 282.			241. 167.	
1117: 3184. 1126: 3961. 1135: 34.	7403. 1	4541. 40 71.62. 105 35.		5514.	562. 5 2412. 6 42.		
<ul><li>1310: 51.</li><li>1319: 56.</li></ul>	101.	20.	34. 488. 16. 1.8.	8.	27. 427. 3 18. ON = 1.0	278. 115. 21. 21.	
PK IT ENER	RGY ARE	a BKGN	р ғынм	CHANNEL L		CTS/SEC	%ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602.	25 2275 20 5251 88 157	1. 60 7. 46 3. 42	8. 2.29 2. 2.24 7. 2.25	1022.69 1 1118.84 1 1128.73 1 1206.02 1	108 32 3 108 32 8	2. 446E. 00 3. 792E. 01 3. 753E. 01 2. 622E. 00	4. 7 0. 7 0. 4 3. 2
5 1 646.	11 12	4. 30	7. 2.19	1292. 42 1	287 13 2	2.066E-01 :	22. 1

2. 31

2.82

1314.70 1306

1331. 22 1.306

35 3.999E 00 2.2

35 3.131E-01 14.2

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S626A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 17425.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 14DEC79 208:28 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 4.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

**>** 

DETECTOR: GELI-8

\* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 KEV/CHNL: 0.5003803

OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

1.

657. 30

130.

166.

• ELEMENT	PEAK ENERGY E	BKGND	AREA	CONCEN		L SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	3231. 8	9943.	0. 078 0. 712 0. 006	6	0.0029	1 3 0. 4 16. 8
<b>101</b> 8: <b>5</b> 33.		L5. 1801	2169.		1961.	265. 1510. 102.	
1117: 260. 1126: 6610. 1135: 60.		L7. 319. 38. 18450. 49. 33.	15564.	10121			2608. 252. 37.
• 1301: 16. 1310: 17. 1319: 10.	20. 2 13. :	l7. 8.	32. 23.	40. 16.	31. 15.	29. 12.	22.
PK IT ENER		BKGND	р рнтн. БМНМ	CORRECT CHANNEL			SEC %ERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	85 2703.		3. 10 2. 27 2. 20 2. 10	1.022. 60 1128. 77 1205. 97 1292. 22	1120 1 1197 2	37 <sup>-</sup> 2. 341  L8 1. 532  26 4. 505  L8 3. 542	E 02 0.3

2. 61.

1314.78 1309

12 2.168E-01 16.7

\* 14 DEC 1979 10:45:19 AM \*\*\*\*\*\*\*\* 

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S626B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 17553.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:4:

ACQUISITION DATE: 14DEC79 218:54 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

ELEMENT		'EAK IERGY 	BKGND	FIF	REA	CONCEN		1 SIGMA ERROR	%ER	ROR
%-COPPER ●%-ANTIMON %-ARSENIC	IY 5		3704. 3245. 149.	899	106. 781. 102.		i4 10 18	0. 0010 0. 0028 0. 0009		1. 3 0. 4 9. 7
1018: 5	i80.	920. 12	263. <b>1</b> 0	l.46. 305. l.62.	147. 2105. 139.	138. 2114. 117.	181. 1901. 101.	269. 1463. 107.	395. 961. 103.	
				335. 345. : 48.	302. 15514. 36.	327. 1.0309. 34.	446. 4616. 38.	899. 1391. 40.	2633. 241. 37.	
<b>1310</b> :	12.	15. 12. 13. EPILEU	1.6. 14. 18. JP CORRI	14.	17. 33. 21. DATA.	17. 23. 13. CORRECT	15. 29. 12. ION =	15. 20. 15. 1. <u>0</u> 22	14. 22. 10.	
PK IT E	ENERGY	HREA	BKGI	I GF	-шнм	CHANNEL	LEFT P	W CTSZ	SEC	%ERR
2 1 5 3 1 6 4 1 6	511. 11 564. 23 502. 90 545. 84 557. 20	13393. 91951. 2993. 221. 104.	37: 33: 4: 3: 1:	16. ; 51. ; 38. ;	2. 28 2. 30 2. 42	1022. 63 1128. 79 1206. 07 1291. 89 1314. 58	1121 1196 1284	32 2.232 18 1.533 18 4.988 17 3.676 11 1.737	E 02 E 00 E-01. 1.	1. 1 0. 3 2. 1 3. 3 9. 6

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S626C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 13948.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:#:

ACQUISITION DATE: 14DEC79 229:21 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:#:

**>** 

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### . UNKNOWN SAMPLE REPORT

5

1

657. 38

85.

1.47.

ELEMENT	PEAK ENERGY	BKGND (	PREH	CONCENT		SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	463: 7	4782.	0. 0801 0. 7429 0. 0049	9 (	3. 0031 <u>.</u>	Ø. 4
1018: 454.	693. 1		113. 1765. 117.	1692.	1557.	1239.	299. 799. 75.
1117: 200. 1126: 5508. 1135: 44.	* * *	232. 256. Ø66. 15Ø66. 35. 22.	12878.	266. 8346. 22.			2106. 216. 31.
1301: 14. 1310: 14. 1319: 12.	12. 16.	10. 21. 17. 22. 16. 9. UP CORRECTE!	27. 16.	38. 9.	25. 9.	20. 9.	
PK IT ENER	:GY AREA	I BKGND	FWHM	CHANNEL L	EFT PW	CTS/SI	EC %ERR
<ul> <li>1 1. 511.</li> <li>2 9 559.</li> <li>3 9 564.</li> <li>4 1. 602.</li> </ul>	81 1121 23 76039	383. . 470.	3. 06 1. 34 2. 30 2. 22	1022, 62 : 1119, 96 : 1128, 79 : 1206, 11 :	L108 30 L108 30	4 1. 858E 5 1. 868E 5 1. 267E 7 3. 758E	00 3.9 02 0.4

2. 04

1314.95 1311 10 1.416E-01 23.1

9111.9065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S604A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 15259.00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ж

:4:

ACQUISITION DATE: 14DEC79 239:43 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SE.C \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**\*** 

رمنس مهد و ددو و رمنی رسور درد در دو درد و ددو و رمنی در دو درد و دادو درد در دادو درد داده داده

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

:4:

### UNKNOWN SAMPLE REPORT

657.26

1877.

ELEMENT	PEAK ENERGY	BKGN	ID	RREA	CONCE	√TR.	1 SIGMA ERROR	%ERROR
%-COPPER M-ANTIMONY %-ARSENIC	511. 0 564. 2 657. 3	348 135 77	i6. 18	972. 3289. 1.797.	0. 006 1. 667 0. 097		0. 0006 0. 0052 0. 0037	9. 2 0. 3 3. 8
<ul> <li>1009: 234</li> <li>1018: 247</li> <li>1027: 254</li> </ul>	<sup>7</sup> . 281.	269. 307. 218.	230. 345. 222.	208. 369. 229.	222. 362. 235.	262. 314. 179.	305.	250. 293. 193.
1117: 2633 1126:14455 1135: 192	5. 26652.	3720. 35462. 142.	3180. 36593. 128.	2291. 30636. 128.	1391. 19552. 117.	1154. 8779. 88.	2631.	5713. 572. 108.
● 1301: 42 ● 1310: 7: 1319: 53	l 104.	47. 185. 54. E-UP CO	47. 302. 43. RRECTE	47. 390. 36. D DATA.		52. 336. 40. ION =	228. 43.	41. 129. 45.
PK IT EN	ERGY AF	REA E	KGND	FЫНМ	CHANNEL.	LEFT F		SEC %ERR
2 2 559 3 2 564 • 4 1 602	9. 27       1.85 4. 19     1914 2. 87         58	352.	3634. 2027. 1416. 1067.	3. 19 2. 39 2. 30 2. 28	1022. 45 1118. 88 1128. 70 1206. 02	1108 1108 1198	16 1.692 35 3.085 35 3.190 18 9.753	E 01 0.8 E 02 0.2 E 00 1.6
	J. 27.11. ~		799.	2. 40	1292. 02	1404	18 7.481	E-01 10.3

2.20

1314.71 1307

17 3.128E 00

812.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:48:49 AM \*\*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\*\*

<sup>1</sup>91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S604B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.3012, 00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 14DEC79 250:22 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL:

0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1

657. 24

1.572.

61.6.

•	ELEMI	EEMT	~ *****		'EAK IERGY	BKG	iND	AREA	CONCE	NTR.	1 SIGMA ERROR	ZER	ROR
•	%-COI %-AN %-AR:	TIP	10NY	5	i10. 9 i64. 2 i57. 2	10	·	828. 50782. 1518.			0. 0006 0. 0053 0. 0038		9. 4 8. 3 3. 9
•	100: 101: 102	8:	203. 222. 207.		217. 226. 191.	1.98. 257. 182.		321.	310.	173. 267. 191.	235.	167. 245. 169.	
•		6:1	L1738.	21	.861	3032. 29217. 82.	30025.	25382.	161.04.	1001. 7204. 77.	2092.	4683. 438. 73.	
•	130 131 131	0:	31. 51. 51. F		80. 36.	146. 30.	36. 259. 32. CORRECTI	319. 33.	24.	287. 33.	188. 27.	37. 98. 26.	
•	PK	17	ENER	(GY	AF	REA	BKGND	FWHM	CHANNEL.	LEFT F	PW CTS/	'SEC	%ERR
•	1 2 3 4 5	1 2 2 1 1	510. 559. 564. 602. 645.	25 19 86	157 156: 46	785. L53. 599.	2668. 1536. 1047. 849. 576.	2. 99 2. 49 2. 29 2. 25 3. 16	1022, 31, 1118, 84 1128, 71 1205, 98 1292, 09	1107 1107 1199	14 1. 430 33 2. 631 33 2. 603 17 7. 832 19 7. 023	.E 01. :E 02 :E 00	9.3 Ø.9 Ø.3 1.7
	_					• • • • • • • • • • • • • • • • • • •	and a find a					, L (L.)L.	9. 6

2.36

1314.67 1305

20 2.620E 00

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 DEC 1979 10:50:00 AM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00 SAMPLE IDENTIFICATION: S604C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11960, 00 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 14DEC79 300:57 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 'ELAPSED REAL TIME: 621. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

×

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* FIBUNDANCE LIMIT: 85. 99%

:1:

#### UNKNOWN SAMPLE REPORT

657. 24

665, 64

1

1.588.

141.

669.

355.

ELEMENT	*****	PERK ENERGY	' BKG	IND	AREA	CONCE	√TR.	1 SIGMA ERROR	%ERRO	R
%-COPPE		510. 9 564. 2			739. 1773.		55 32			
Z-ARSEN			2 6		1534.			0. 00Jo 0. 0043	e. 4.	
1009:	184.	21.8.	208.	171.	191.	203.	194.	190.	197.	
	214.	253.	260.	311.	309.	307.	285.	228.	248.	
1027:	191.	208.	195.	209.	1.73.	194.	186.	166.	181	
1117:	2225.	2838.	3086.	2655.	1867.	1220.	1005.	1683.	4586.	
.1126:1	1816.	22009.	29362.	30651.	25584.	16190.	7144.	2114.	420.	
1135:	152.	90.	102.	89.	90.	91.	81.		86.	
1301:	28.	34.	37.	20.	32.	32.	41.	32.	37.	
1310:	35.	84.	164.	252.	338.		280.		95.	
1319:	48.	39.		25.	33.		42.		31.	
<b>)</b>	Ŀ.	ULSE-P	(LE-UP C	ORRECTE	D DATA.	CORREC				
PK IT	ENER	GY f	REA	BKGND	FЫНМ	CHANNEL	LEFT F	РЫ СТ≶∕	SEC %E	RF
1 1	510.	89	765.	2856.	3. 03	1022, 18	1016	14 1. 275	E 00 10.	7
2 2	559.	27 1	5865.	1593.	2. 48	11.18. 87		36 2.644		•
3 2	564.	19 <b>1</b> 57	7179.	1076.	2. 28	11.28. 71		36 2. 626		
4 1.	602.	86 4	4849.	1408.	2. 35	1206.00		32 8. 082		
5 1.	645.	96	440.	541.	2. 63	1292.13		18 7. 328		

2.37

2.56

1314.66 1308

1331.46 1327

19 2.647E 00

10 2.347E-01 21.1

3.5

D LAD# 91119065 5 QT

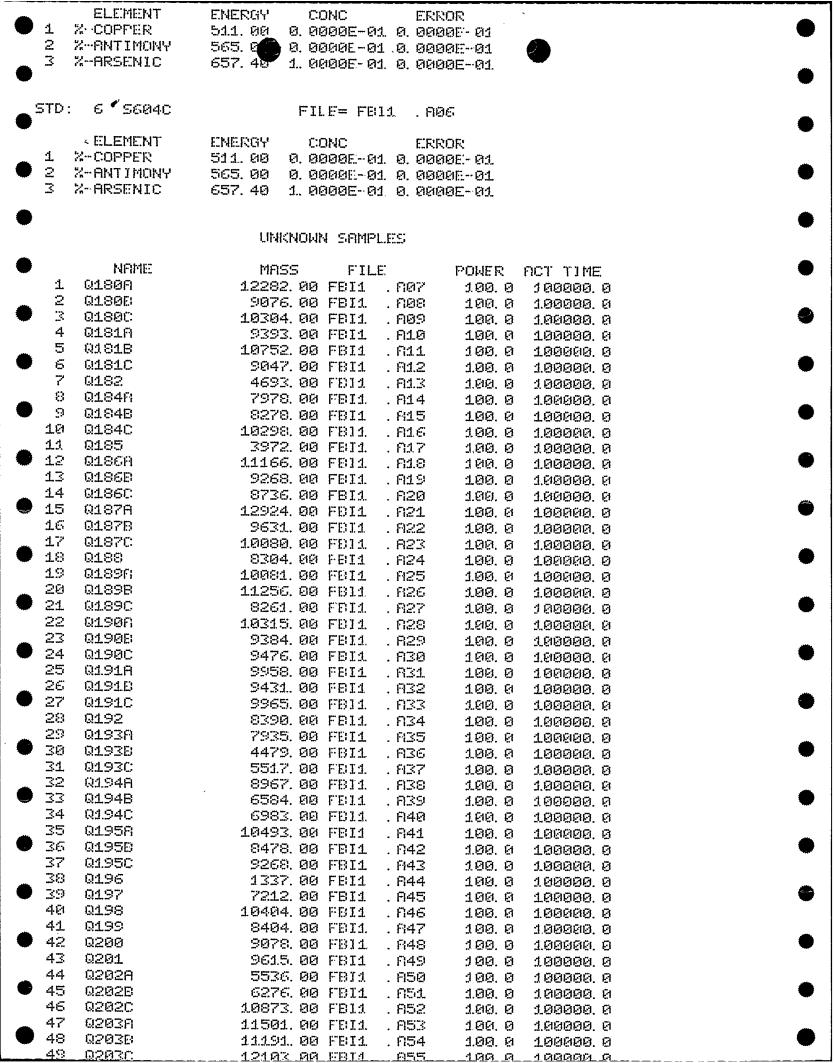
91119065 RF	LERD-SECOND	IRREDIATION	Z.2.0',	rradiation 12/17/19
SAMPLE '	SAM. WT.	%-COPPER	X-ANYONY	%-ARSENIC
●0180A 0180B 0180C →	12282. 000 9076. 000 10304. 000	0. 03797 0. 03776 0. 03692	0. 731.65 0. 72960 0. 73447	0. 00564 0. 00977 0. 00640
**		0.03755 fiVG 0.000552 SD 1.469810 XRSD	0.73191 AVG 0.002445 SD 0.334002 %RSD	0.00727 AVG 0.002199 SD 30.235859 %RSD
⊕0181A 0181B 0181C	9393, 000 10752, 000 9047, 000	0. 06951 0. 05444 0. 05690	1.09656 0.82336 0.85514	0. 00699 0. 00531 0. 00499
0		0.06028 AVG 0.008084 SD 13.409646 %RSD	0.92502 AVG 0.149407 SD 16.151731 %RSD	0.00576 AVG 0.001076 SD 18.663805 XRSD
<b>0</b> 182	4693. 000	Ø. Ø5799	Ø. 84482	0. 00651.
0184A ● 0184B 0184C	7978. 000 8278. 000 10298. 000	0. 04907 0. 04983 0. 04807	0. 791.83 0. 81267 0. 80929	0. 00519 0. 00526 0. 00636
		0.04899 RVG 0.000885 SD 1.806434 XRSD	0.80460 AVG 0.011188 SD 1.390501 %RSD	0.00560 AVG 0.000660 SD 11.769661 %RSD
Q185	3972. 000	0. 00629	2. 56102	0. 04187
0186A 0186B ●0186C	11166. 000 9268. 000 8736. 000	0. 05743 0. 05583 0. 05703	0. 85444 0. 82070 0. 80988	0. 00493 0. 00523 0. 00440
•		0. 05676 RVG 0. 000830 SD 1. 462595 %RSD	0.82834 AVG 0.023245 SD 2.8061.69 %RSD	0.00485 FIVG 0.000421 SD 8.681105 %RSD
0187A 01876 0187C	1.2924. 000 9631. 000 10080. 000	0. 031 <i>6</i> 1 0. 03201 0. 03042	0. 69261 · 0. 68483 0. 68240	0. 01018 0. 00944 0. 00758
• •		0.03135 AVG 0.000825 SD 2.632815 XRSD	0.68661 AVG 0.005330 SD 0.776296 XRSD	0.00907 NVG 0.001335 SD 14.728997 XRSD
<b>Q</b> Q188	8394. 999	0. 03686	Ø. 876Ø6	0.00997
● 0189A 0189B 0189C	10081. 000 11256. 000 8261. 000	0. 04487 0. 04629 0. 04782 🔥	0. 75953 0. 81977 0. 82588 .	0. 00535 0. 00703 0. 00816
•		0. 04633 <u>RVG</u> 0. 001478 SD 3. 189529 %RSD	0.80173 AVG 0.036675 SD 4.574474 XRSD	0. 00685 AVG 0. 001413 SD 20. 636072 %RSD
●0190A 0190B	10315. 000 9384. 000	0. 05456 0. 05451	8.85442 ( 0.97040	: 0.00306 0.00455

Q190C	947è. 000	Ø. Ø5432	0.82192 <	8. 00307
•		0.05446 RVG 0.000122 SD 0.223980 XRSD	0.848 RVG 0.024574 SD 2.895084 XRSD	0. 00465 AVG 0. 000000 SD 0. 000000 %RSD
●01918 01910. 01910	9958. 000 9431 000 9965. 000	0. 04062 0. 04106 0. 04423	0. 74726 0. 79812 0. 86599	0. 00657 0. 00754 0. 00766
•		0.04197 RVG 0.001972 SD 4.699369 XRSD	0.80379 AVG 0.059569 SD 7.410927 %RSD	0.00726 AVG 0.000597 SD 8.228967 %RSD
●0192	8390, 000	0. 04109	9. 78169	0. 00800
01938 ●01938 01938	7935. 000 4479. 000 5517. 000	0. 03580 0. 03499 0. 03657	0. 71861. 9. 72818 9. 72227	ଷ. 00922 ଷ. 00884 ଷ. 01293
•		0.03579 AVG 0.000788 SD 2.200669 XRSD	0.72302 AVG 0.004825 SD 0.66731.0 %RSD	0.01033 AVG 0.002259 SD 21.863016 %RSD
0194A ●0194B 0194C	8967. 000 6584. 000 6983. 000	0.03721 8.0381.6 9.04672	0. 791.71 0. 78651 0. 99405	ଉ. ଉପଃ76 ଉ. ଉପ926 ୪. ଉପ965
•		0.04070 AVG 0.005238 SD 12.870483 %RSD	0.85742 NVG 0.118351 SD 13.803031 %RSD	0.00922 AVG 0.000442 SD 4.796295 %RSD
0195R ●0195D 0195C	10493. 000 8478. 000 9268. 000	0. 06098 0. 06637 0. 06317	0.73921	0. 00259 0. 00314 0. 00268
•		0.06351 RVG 0.002713 SD 4.272680 KRSD	0.76910 AVG 0.041993 SD 5.459991 %RSD	0. 00000 FIVG 0. 000000 SD 0. 000000 XRSD
<b>019</b> 6 ●	1337. 000	0. 08693	9. 60581	0. 01.051
Q197 -	7212. 000	0. 01259	0. 85547	Ø. <b>15</b> 898
●0198	10404. 000	0. 01.203	9. 86969	0. 16713
0199 ●	8404. 000	0. 01903	1. 48253	Ø. 29856
0200	9078.000	0. 01.272	Ø. 81247	0. 15564 -
<b>0</b> 0201.	9615. 000	0.01979	1. 43543	а. 28580
Q202A ● Q202D Q202C	5536. 000 6276. 000 10873. 000	0. 00243 0. 001.78 0. 001.58	0. 01387	0.00218 0.00193 0.00116
•		0.00193 AVG 0.000444 SD 23.000334 %RSD	0.01467 AVG 0.000711 SD 4.849771 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD

0203A ●0203B 0203C	11501. 000 11191. 000 12103. 000	0. 88239 8. 88272 8. 88223	0.12452	0. 00121 0. 00146 0. 00125
•		0.00245 AVG 0.000255 SD 10.408551 %RSD	0.12635 RVG 0.006126 SD 4.848546 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
0204A • 0204B • 0204C	8918. 000 9279. 000 11976. 000	0. 03968 0. 03286 0. 03235	0.00224	0. 00147 0. 00157 0. 00103
•		0.03497 AVG 0.004093 SD 11.705938 XRSD	0.00177 RVG 0.000408 SD 23.124815 %RSD	0. 00000 AVG 0. 000000 SD 0. 000000 XRSD
Q205A ● Q205B Q205C	9347. 000 8898. 000 9437. 000	0. 00313 0. 00306 0. 00303	0. 13807	0. 00172 0. 00188 0. 00168
•		0. 00307 FIVG 0. 000054 SD 1 742533 XRSD	0.14906 RVG 0.013167 SD 8.833176 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
5626A • 5626B 5626C	10957. 000 10664. 000 8908. 000	0. 07748 0. 07609 0. 081.03	0. 72139 0. 71966	0. 00471 0. 00353 0. 00332
•		0.07820 AVG 0.002547 SD 3.256817 %RSD	0.71992 AVG 0.001368 SD 0.189992 XRSD	0.00471 AVG • 0.000000 SD 0.000000 %RSD •
S604A ● S604B S604C	8652. 000 9725. 000 91.77. 000	0. 00614 0. 00860 0. 00690	1. 84138 1. 88257 1. 90123	0. 09751 0. 09853 0. 10379
•		0.00721 AVG 0.001.259 SD 17.470303 XRSD	1.87506 AVG 0.030625 SD 1.633261 XRSD	0.09994 AVG 0.003368 SD 3.370013 %RSD
•				•

(TI)TITLE: 91119065 RF LEAD-SECOND TRRADIATION (LN)LIBRARY: (SA)SAMPLE TIME: 17DEC79 1017:00 (SE)STD ÉNERGY TOLERANCE: (UE)UNK ENERGY TOLERANCE: (TF)THERMAL FLUX: 0.0000E-01. (EF)EPITHERMAL FLUX: 0.0000E-01 (FF)FAST FLUX: 0.0000E--01 (QU)UNITS: UG ELEMENT ENERGY HALF-LIFE SEC % COPPER 511.00 1.2700E 01 H 4.5720E 04 X-FINTIMONY 565. 00 2.7200E 00 D 2.3501E 05 X-ARSENIC 657. 40 2. 6300E 01. H 9.4680E 04 STANDARD SAMPLES MRME: MASS FILE POWER ACT TIME 1 S626A 10957.00 FBI1 . N01 1.00. 0 1.00. 0 100000.0 2 S6268 10664.00 FBI1. . NO2 1.00000.0 1.00. 0 1.00. 0 56260 . RØ3 8908.00 FB]1 1.00000.0 S604A 8652.00 FEJ1 . 804 100000.0 5 5604B 9725.00 FEI1 . A05 100.0 1.00000.0 S604C 9177.00 FBI1 . A96 100.0 100000.0 STD: 3 5626N FILE= FBI1 . A01 ELEME: NT ENERGY COMC ERROR Z-COPPER 511.. 00 7. 8000E-02 0. 0000E-01 X-ANTIMONY 565. 00 7. 2000E-01. 0. 0000E-01. X- ARSENIC 657. 40 0.0000E-01 0.0000E-01 STD: 2 S626B FILE= FDI1 . A02 ELEMENT ENERGY CONC ERROR X-COPPER 51.1.00 7. 8000E-02 0. 0000E-01 W-ANTIMONY 565. 00 7. 2000E-01 0. 0000E-01 X-ARSENIC 657, 40 0.0000E-01 0.0000E-01 STD: 3 56260 FILE= FBI1 . R03 ELEMENT ENERGY CONC ERROR Z-COPPER 511. 00 7. 8000E-02 0. 0000E-01. X-ANTIMONY 565. 00 7. 2000E-01 0. 0000E-01 657, 49 X-ARSENIC 0.0000E-01 0.0000E-01 STD: 4 S604A FILE= FBI1. . A04 ELEMENT ENERGY CONC ERROR %- COPPER 1 511. 00 0.0000E-01 0.0000E-01 % FINTIMONY 565.00 0.0000E-01 0.0000E-01 X-ARSENIC 657, 49 1. 0000E:-01 0. 0000E-01. STD: 5 56048

FILE= FBI1 . A05



51. 03 52 03 53 03 54 03 55 03 56 56 56 57 56 58 56 59 56	205A 2058 205C 226A	8918. 00 FB11 9279. 00 FB11 11 S. 00 FB11 9347. 00 FB11 8898. 00 FB11 9437. 00 FB11 10957. 00 FB11 8908. 00 FB11 8652. 00 FB11 9725. 00 FB11	. R57 . R59 . R59 . R61 . R61 . R02 . R03 . R04 . R05	1.00. 0 1 1.00. 0 1 1.00. 0 1 1.00. 0 1 1.00. 0 1 1.00. 0 1 1.00. 0 1	1.00000.   1.00000.   1.00000.   1.00000.   1.00000.   1.00000.   1.00000.   1.00000.   1.00000.	3 3 3 3 3 3 3 3 3 3
•						
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91119065 RF LERD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S626A

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 10957.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 2339:36 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. \* NER ITERATIONS: SEC 10.

: 1

+:

DETECTOR: GELI-8 \* LIERARY: NUCL. LIB1

▶DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1:

ENERGY WINDOW 499, 787 TO 674, 920

PK IT ENERGY BREA BKGND FWHM CHAMNEL LEFT PW CTS/SEC XERR FIT 1 1 544.03 20863. 3.06 5767. 1022, 47 1011 23 3.477E 01 0.9 3.42E 00 2 5 559, 70 2190. 1257. 1.72 1119, 72 1109 37 3.650E 00 3. 1 4. 79E~81 3 5 5G4. 14 182693. 2.34 1572. 1.1.28. 60 11.09 37 3.045E 02 0.2 4 1 602, 79 5332. 1570. 2.42 1205.86 1194 23 8.886E 00 1., 7 2.49E 00 Ę 1 645, 85 311. 542. 2. 15 1291.90 1287 11. 5. 182E-01 12. 0 9. 50E-01 e. 1 657, 47 196. 907. 4.34 1315.14 1306 19 3. 264E-01 22. 9 4. 49E

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT **ENERGY** AREA CONCENTR. ERROR CONSTRNT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.0 20863. 7.8000E-02 0.0000E-01 8.4819E-02 7.3177E-04 Z-ANTIMONY 565. 0 7. 2000E-01. 0. 0000E-01. 4. 4527E-02 1. 0507E-04 182693. %-ARSENIC 657.4 Θ. 0.000E-01.0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 8:28:59 AM \* ને એએએએએએએએએએએએએએએએએએએએએએએએએએએએ 91119065 RF LEAD-SECOND IRRADIATION SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S626B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 10664, 00 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TRB1 ACQUISITION DATE: 17DEC79 2350:14 → FWHM(1332) 2.390 600.

PRESET TIME(LIVE): SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 % ELMPSED LIVE TIME: 699. SEC \* MBR ITERATIONS: 10.

:4: DETECTOR: GELI-8

\* LIBRARY: NUCL, LIE1 DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE:

1.750KV 0.5003803 KEY/CHML: \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* RBUNDANCE LIMIT: 85. 00% :1:

·林林林村(首)(林林林村)(林村村)(林林村村)(林林村)(村)(村)(林林村村)(村)(林林村村)(林村村)(林林村村)(林村村)(村)(林村村)(村)(村)(村)(村)(村)

ENERGY WINDOW 499. 787 TO 674. 920

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PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT FW CISISEC **MERR** FIT 1 1 51.1.. 04 1.9748. 5549. 3.14 1022.49 1012 23 3.291E 01 0.9 1.25E 00 2 559, 63 972. 2065. 1. 37 1119,60 1109 30 3.442E 00 3. 1 8. 11E 3 7 564.14 177948. 1441.. 2.35 1128.60 1109 30 2.951E 02 Ø. 2 4 602, 79 1 5146. 1169. 2.42 1205.84 1195 19 8.576E 00 1.7 2.92E ØØ ä 1 645, 88 REIØ. 2.99 799. 1291.97 1287 17 6. 334E-01. 11. 7 2. 94E 1 656.95 118. 903. 1314.10 1305 2. 13 1.9 1. 974E-01 37. 0 1. 99E

PERK SERRCH COMPLETED

ELEMENT	EMERGY	AREA	CONCENTR.	ERROR	CONSTRINT	ERROR
_				(1 SIGMA)		(1 SIGMA)
₩-COPPER	511. 0	19748.	7. 8000E-02	0. 0000E-01.	8. 3294E-02	7. 4077E04
X-RWTIMONY	565. 0	177048.	7. 2000E01.	0.0000E-01	4. 4420E-02	1 0642E-04
_ %-RRSENIC	657. 4	Ø.	0.0000E-01	0.0000E-01	0.0000E01	0. 0000E-01

\*\*\*\*\*\* 18 DEC 1979 8:30:08 AM \*\*\*\*\*\*\* 91119065 RF LEAD-SECOND IRRADIATION SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8908. 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. Triess :4:

ELRPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV

KEY/CHNL: 0.5003803 \* MALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%

ENERGY WINDOW 499.787 TO 674.920

PK IT ENERGY RREA BKGND FWHM CHANNEL LEFT FW CTS/SEC **XERR** FIT 1 1 511.. 04 17398. 4364. 3, 12 1022.49 1011 23 2.900E 01. 0.9 2.50E 00 2 1.0 559, 67 1.35 1913. 840. 1119.68 1108 38 3.189E 00 3. 1 6. 14E 3 1.0 564. 1.5 147418. 1231. 2.35 1128.63 1108 38 2.457E 02 Ø. 3 4 1 602.81 4320. 2, 35 905. 1205.89 1195 20 7.2005 00 1.8 9.75E-01 5 1. 646.15 280. 623. 2. 64 1292, 50 1284 15 4.673E-01 13.9 2.36E QA

PEAK SEARCH COMPLETED

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
				(1 SIGMA)		(1 SIGMA)
 %-COPPER	511. 0	17398.	7.8000E-02	0. 0000E01.	8.8701E-02	8. 2407E-04
2-ANTIMONY	565. Ø	147418.	7. 2000E-01	0. 0000E-01.	4. 4360E-02	1. 1650E-04
X-RRSENIC	657. 4	0.	0. 0000E-01	0. 0000E-01	0.0000E-01	0. 0000E-01

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 8:31:12 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* and the state of t 91119065 RF LEAD-SECOND IRRADIATION SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S604A TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8652, 000 UNITS: LIG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 18DEC79 1.1:27 \* FWHM(1332) 2.390 PRESET TIME (LIVE): \* SENSITIVITY: 600. SEC 4.000 ELAPSED REAL TIME: 650. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 699. SEC \* NER ITERATIONS: 10.

:1:

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* RBUNDANCE LIMIT: 85. 00%

ENERGY WINDOW 499, 787 TO 674. 920

PK IT ENERGY BREA **E:KGND** FWHM CHANNEL LEFT PW CISZSEC ZERR FIT 1 1 510.98 1267. 7193. 3. 24 1022.37 1016 14 2.112E 00 9. 9 1. 55E 00 2 3 559, 48 32267. 4398. 2.38 1118.70 1188 34 5.378E 01 0.68.42E 3 3 564, 12 366148. 3838. 2.37 1128.57 1108 34 6.102E 02 Ø. 2. 4 1 602, 77 10544. 3145. 2.35 1205.81 1196 19 1. 757E 01 1. 2 9. 10E-01 5 1 645.86 892. 1557. 7.8 9.82E-@d 2.87 1.291. 92 1.286 13 1.337E 00 1 657, 11 3158. 1876. 2. 39 1314, 40 1307 16 5, 264E 00 2. 6 4. 40E--

PEAK SEARCH COMPLETED

ELEMENT	EMERGY'	AREFI	CONCENTR.	E.RROR	CONSTRINT	ERROR
_				(1 SIGMA)		(1 SIGMA)
₩%-COPPER	511.0	0.	0. 0000E-01.	0. 0000E-01.	0. 0000E-01	0. 0000E01
%-RNTIMONY	565. 0	0.	0. 0000E-01	0. 0000E-01	0.0000E-01	0.0000E-01
_ %-ARSENIC	657. 4	3158.	1.0000E-01	0. 0000E01	8. 7978E-03	2. 3156E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 8:32:15 AM 40444444444444444444444 \*\*\*\*\*\*\* 91119065 RF LEAD-SECOND IRRADIATION SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S604B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9725.000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: FFF. TAB1. :1: ACQUISITION DATE: 18DEC79 22:29 \* FWHM(1332) 2.390

ACQUISITION DATE: 18DEC79 22:29 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \*\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFF RETIO: 8 AA

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

:4:

ENERGY WINDOW 499, 787 TO 674, 920

PK	TT	ENERGY	AREA	BKGND	FWHM	CHANNEL	L.EFT	РЫ	CTS/SEC	ZERR	FIT
	1	540.83	1.975.	7767.	3. 53	1022. 08	1016	14	3. 292E 00	6. 7	7. 13E-01
 22	2	559. 18	35355.	5090.	2. 36	1118.70	1107	35	5.892E 01	9.6	7.51E 01.
3	2	564. 12	41.9937.	4550.	2. 38	1128.56	1107		6. 999E 02		•
4	1.	573. 40	1.48.	4311.	4.83	1147. 11	1141	1.2	2. 461E-01	63.4	3. 30E 00
 5	1	602. 77	12327.	381.2.	2. 37	1.205.81	1198	17	2. 055E 01.	1.1:	2.03E QO
6	1	645. 86	794.	2408.	2. 78	1291. 93	1285	1.5	1. 324E 00	9.4	3. 90E-💂
7	1	657. 15	3570.	2328.	2. 41	1314, 49	1.307	16	5. 950E 00	2.5	1 30F 00

PEAK SEARCH COMPLETED

	ELEMENT	E.NERGY	AREA	CONCEINTR.	ERROR	CONSTANT	ERROR
					(1 SIGMA)		(1 SIGMA)
	%-COPPER	511. 0	0.	0. 0000E-01	0. 0000E-01.	9. 9999E91	0. 0000E-01
_	%-RNTIMONY	565. Ø	0.	0. 0000E-01.	0. 0000E-01.	0. 0000E-01	0.0000E-01
	2-ARSENIC	657. 4	3570.	1. 0000E01	0. 0000E-01	8. 8901.E-03	2. 2587E-04

8:33:19 AM 4444444444444444444444444 \*\*\*\*\*\*\*\* 91119065 RF LEAD-SECOND IRRADIATION SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STRINDRRD SAMPLE QUANTITY: 91.77. 000 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TRB1 

:4:

ACQUISITION DATE: 18DEC79 33:40 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 655. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10. :::

DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ENERGY WINDOW 499.787 TO 674.920

Ď	PK	17	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	F'M	CT5/SEC	ZERR	FIT
-	1	1	511. 08	1480.	8740.	2. 93	1.022, 56	1.01.4	1.6	2. 467E 00	9.34.	. 30E 00
_	2	2	559. <b>1</b> 8	34044.	4833.					5. 674E 01		
	3	2	564. 12	39941.3.	4313.					6. 657E 02		
	4	1.	602. 78	11587.	4253.					1.931E 01		
	5	1.	G46. 04	706.	2062.					1.176E 00		
	63	1.	657. 13	3534	1811.					5 885F AA		

PEAK SEARCH COMPLETED

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	COMSTRNT	ERROR
<b></b>				(1 SIGMA)		(1 SIGMA)
●%-COPPER	511 0	ව.	0. 0000E01	0.0000E-01	0. 0000E-01.	0. 0000E-01
%-RNTIMONY	565. 0	0.	0. 0000E-01	0. 0000E01	0.0000E-01.	0. 0000E-01
_ %-ARSENIC	657. 4	3531.	1. 0000E-01	0. 0000E01	9.3642E-03	2. 2430E-04

# SUMMARY OF STANDARD CONSTANTS:

-1	S.I EMERIA	%-COPPER	ውግ	511.	C4 C4	12 CT 1.3
•	I F 1 L L	ATUUR FER	C1 i		616)	K.E.V

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
5626A 5626B	7. 8000E-02	8. 4819E-02	7. 3177E-04
5626C	7. 8000E-02 7. 8000E-02	8. 3294E-02 8. 8701E-02	7. 4077E-04 8. 2407E-04
MEAN CONSTANT,	3 STDS:	8. 5386E-02	4. 4013E-04

# 2. ELEMENT X-ANTIMONY AT 565.00 KEV

STANDARD NAME	CONCENTR.	CONSTRINT	ERROR
5626A	7. 2000E-01	4. 4527E-02	(1 SIGMA) 1.0507E-04
5626B 5626C	7. 2000E-01. 7. 2000E-01	4. 4420E-02 4. 4360E-02	1. 0642E- 04 1. 1650E-04
MEAN CONSTANT,	3 STDS:	4. 4441.E-02	6. 2923E-05

# 3. ELEMENT %-ARSENIC AT 657.40 KEY

•	STANDFIRD NAME.	CONCENTR.	CONSTANT	ERROR
•	5604A S604B S604C	1. 0000E01 1. 0000E01 1. 0000E01	8. 7978E-03 8. 8901E-03 9. 3642E-03	(1 SIGMA) 2.3156E-04 2.2587E-04 2.2430E-04
)	MEAN CONSTANT.	z cyne.	9 000EE_02	4 74465.74

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0180A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12282.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

4:

ACQUISITION DATE: 17DEC79 1352:04 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. \* SENSITIVITY: SEC: 4.000 ELAPSED REAL TIME: 633. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 19.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CRLIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:10

### UNKNOWN SAMPLE REPORT

1

657.03

341.

ELEMENT	PEAK ENERGY	BKGNI	D F	REFI	CONCER		1 SIGMA ERROR	%ERROR
**COPPER ***ANTIMONY ***ARSENIC	511 0 564. 1 657. 0	776, 202: 105	2. 236	9553. 1448. 341.	0. 038 0. 731 0. 005	.6	0. 0004 0. 0019 0. 0008	1. 1 0. 3 14. 6
• 1009: 375. 1010: 1092. 1027: 929.	366. 1645. 589.	344. 2325. 446.	365. 2919. 344.	374. 3225. 366.	384. 3215. 345.	433. 2722. 319.	556. 2127. 273.	787. 1478. 311.
1117: 1024. 1126:21298. 1135: 256.	1195. 35669. 21.7.	1315. 451.98. 255.	1209. 451.69. 1.93.	1024. 3651.7. 188.	1.01.3. 21.706. 176.	1360. 8821. 148.	3137. 2369. 185.	8914. 563. 167.
1301: 94. 1310: 87. 1319: 74.	76. 83. 77. ULSE-PIL	83. 128. 77. E-UP CO	78. 123. 62. RRECTED	87. 142. 64. DATA.	80. 162. 77. CORRECT	81. 126. 83. TION =	88. 94. 79. 1. 000	67. 76. 59.
PK IT ENER	GY AR	EA E	KGND	FWHM	CHFINNEL	LEFT P	W CTS/	SEC ZERR
<ul> <li>1 1 510.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> </ul>	31 57 10 2304	14. 48.	7764. 2802. 2022. 2356.	3. 13 2. 59 2. 31 2. 35	1022.36 1118.95 1128.52 1205.74	1111 1111	24 3.259 31.9.523 31 3.841 25 1.002	E 00 1.9 E 02 0.2
5 1 645.	81. 4	51	1002.	2. 57	1.291.82	1286	12 7.510	

2.12

1314. 24 1308

13 5.678E-01 14.5

1050.

## 91119065 RF LERD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q1808

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9076.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABLE

:4:

ACQUISITION DATE: 17DEC79 1402:51 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:#:

DETECTOR: GEL1-8 # LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

- 郑林可将对对中部林林对河南的水中的河南的水中水中水中水中水中的河南水中水中水中水中的水中水中水中水中水中水中水平水平水平

### UNKNOWN SAMPLE REPORT

645.89

657.17

269.

434.

1318.

724.

1

1

ELEMENT	PE:AK ENERGY	BKG	ND	AREA	CONCE		1 SIGMA ERROR	ZERROR
Z-COPPER Z-ANTIMONS							0. 0005 0. 0021	1. 2
%-ARSENIC					e. ra: 0. 00:		0.0021 0.0010	
1009: 23			279.	261.	279.	301.	397.	523.
1018: 85	4. 1188.	1641	2123.	231.5.	231.6.	2052.	1631.	1050.
1027: 69	9. 440.	327.	266.	261.	204.	192.	209.	203.
1117: 72	'0. 893.	968.	949.	784.	794.	986.	2299.	6282.
1126:1521	6. 26204.	33136.	33497.	27261.	16151.	6532.	1.767.	339.
1135: 16	3. 142.	113.	131.	108.	101.	110.	84.	88.
1301: 5	i9. 48.	67.	43.	59.	47.	47.	58.	42.
1310: 5					104.			57.
1319: 6	1. 60.	59.	43.	44.	55.	60.	47.	36.
ŧ	PULSE-PI	LE-UP C	ORRECTE	D DATA.	CORRECT	TION =	1. 000	
PK IT EN	IE.RGY F	IREA	BKGND	FWHM	CHANNEL	LEFT F	'W CTS/	SEC ZERR
1 1 51	1.02 14	.229.	5236.	3. 14	1.022. 44	1013	22 2. 371	E 01 1.1
2 3 55	i9. 40       4	675.	2007.	2. 76	1119. 14		36 7. 791	
	4. 1.1     1.69	495.	1316.	2. 30	1.128. 55		36 2.825	
	:0. 98	1.47.	732.	3. 56	1182. 25	1.1.80	12 2.458	
5 1 60	)2. 78       4	494.	1211.	2. 27	1205, 84		18 7, 498	

2.42

2. 69

1291.98 1.280

1314.54 1307

21 4.331E-01.20.7

16 7.232E--01 10.0

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0180C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10304.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

:1:

ACQUISITION DATE: 17DEC79 1413:29 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 627. SEC \* SHAPF PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 11ERATIONS: 10.

ETT ETT STORE . TOTAL TO THE

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* REUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

1

657. 09

321.

690.

ELEMENT	E	PEAK ENERGY	BKG	AD I	AREA	CONCE	VTR.	1 SIGMA ERROR	%ERROR
%-COPPER A-ANTIMO A-ARSENI	NY	511. 0 564. 1 657. 1	63: 15: 6:	90. 19:	5646. 3347. 321.		15	0. 0004 0. 0020 0. 0005	1. 2 0. 3 12. 9
1008: 1018:	- 263. 826. 693.	299. 1325. 510.	291. 1875. 377.	268. 2291. 307.	340. 2490. 290.	9. 99. 333. 2506. 233.	,401. 2190. 198.	e. eees 429. 1771. 226.	598. 1199. 238.
1126:17	870. 483. : 212.	989. 29793. 1.39.	1094. 37666. 156.	971. 37934. 127.	909. 30798. 120.	878. 18587. 139.	1.110. 7618. 126.	2541 2055. 128.	7252. 430. 118.
1301: 1310: 1319:	55. 59.	46. 60. 54. _SEPIL	66. 84. 56. EUP C:	59. 122. 54. ORRECTF:	62. 120. 53. D DATA.	48. 117. 58. CORRECT	62. 92. 65. "ION =	66. 91. 52. 1. 000	65. 68. 58.
PK IT	ENERG'	r' AR	EFI	BKGND	FЫНМ	CHANNEL.	LEFT F	W CTS/	SEC: XERR
2 3 3 3 4 1	511 06 559. 3: 564. 1: 602. 7:	5 48 1 1933 5 50	36. 47. 190.	6324. 2225. 1590. 1494.	3. 21 2. 55 2. 32 2. 30	1022. 42 1119. 04 1128. 54 1205. 76	1110 1110 1196	24 2.608 31 8.059 31 3.222 18 8.483	E 00 2.0 E 02 0.2 E 00 1.8
5 1	645. 88	9 3	<u> </u>	780.	2. 51.	1291.80	1287	12 5.608	E-01 12.9

2.26

1314.36 131.0

12 5.351E-01 12.8

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q181A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9393.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1424:08 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 637. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 1.0.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

### UMKNOWN SAMPLE REPORT

657. 1.8

31.8.

869.

ELEMENT	100 commo dus Es éle é déta - mai	PERK ENERGY	BKG	ND	FIREA	CONCE	VTR.	1 SIGMA ERROR	ZERR	OR
%-COPPER NTIMC		511. 0 564. 1	84: 21:		6589. 2647.		35 56			). 9 ). 2
%-ARSENI	C	657. 2	3		318.	0. 007		0. 001.0		. s. . 3
	416.	386.	373.	432.	460.		522.	725.	951.	
1018: 1 1027: 1		21.84. 815.	3008. 543.	3896. 433.	4253. 380.		3706. 356.		1970. 354.	
1117:	824.	91.1	1050.	985.	1004.	1105.	1604.	3648.	10219.	
1126:23 1135:	3837. 315.	40603. 291.	51384. 264.	51616. 216.	41.421. 217.	25068.	10319. 222.	2802.	633. 188.	
1301.:	91.	98.	81.	91.	108.		92.		 82.	
1310:		96. 83.	110. 78.	1.19. 79.	135. 96.	132.	128. 90.	112.	82.	
ana an - 21/2 an *		JLSE-PIL							93.	
PK XT	ENERO	GY AF	REA ∶	BKGND	FWHM	CHFINNEL	LEFT F	W CTS/	'SEC %	ERR:
	510. 9		89.	8435.	3. 16	1022. 37		23 4.431	LE 01 0	). 8
2 10 3 10	559. 6 564. 1		•	1542.	1. 29	1119.65		34 7.049		2. 0
	602. 7			2163. 2134.	2. 32 2. 28	1128, 53 1205, 78		34 4.377		1. 2
	645. 9			2.134. 1287.	2. 20 2. 54	1292.05		17 1. 148 13 8. 261		5 2

2.64

1314.55 1310

11 5.304E-01 14.2

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q1818

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10752.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\_ \*\*\*\*\*<sup>|</sup>

:1:

ACQUISITION DATE: 17DEC79 1434:58 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: SEC 632. \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1:

**>** 

:1:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

'DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1:

### UNKNOWN SAMPLE REPORT

657.10

276.

816.

ELEMENT		PERK ENERGY	' BKG	iND	AREA	CONCER	ITR.	1 SIGMA ERROR	ZERROR
%-COPPE %-ANTIM %-RRSEN	10NY	511. 9 564. 1 657. 1	. 18	42. 22	3606. 5313.	Ø. 821		0. 0021	1. 0 0. 3
	346.	360. 1.879.	338. 2653.	349. 3445.	276. 350. 3782.	0. 00: 421. 3783.	93 466. 3309.	0. 0008 566. 2517.	15. 9 781. 1686.
1027: ) 1117:	1.111. 692.	681. 791.	479. 845.	369. 817.	310. 855.	287. 942.	275. 1351.	285. 2902.	288. 8531.
1126:2 1135:	201.18. 239.	34531. 229.	43612. 187.	44385.	35868. 172.	21992.	9000. 171.	2402.	582. 1.22.
1301: 1310: 1319:	74. 79. 55.	65. 79. 65.	67. 92. 71.	111.	74. 85. 68.	125. 62.	67. 111. 71.	82. 54.	58. 75. 62.
PK IT	ENER		REA	BKGND	D DATR. FWHM		LEFT F		SEC XERR
1 1 2 6 3 6	544. 559. 564.	66 2	3606. 2887. 5313.	6930. 1374. 1842.	3. 14 1. 51 2. 32	1022. 40 1119. 65 1128. 56	1109	22 3, 934 30 4, 812 30 3, 755	E 00 2.6
4 1 5 1	692. 646.		5040. 465.	1441. 1.233.	2. 32 3. 06	1.205. 74 1292. 33	1197 1285	17 1. 007 18 7. 750	

2.42

1314.39 1309

12 4.592E-01 1.5.9

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q181C

SHMPLE IDENTIFICATION: Q181C TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9047.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

:4:

ACQUISITION DATE: 17DEC79 1445:45 \* FWHM(1332) 2.390 PRESET TIME(LIVE): SEC 600. \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERFITIONS: 19.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB4.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

656.99

217.

669.

ELEMEN	₹T	PEFIK ENERG'	r' EKG	ND I	RREA	CONCE	YTR.	1 SIGMA ERROR	%ERRO	R
Z-COPF Z-RNT)		51.1. ( 564. :			0556. Geografia	0. 056 9. 85	-	0. 0006 c coc:	1.	
	ENIC		••••		217.	9. 80: 9. 99:		0. 0023 0. 0009	9. 1 18. 1	
1009:		286.		337.	31.4.	320.	391.	484.	698.	
1018:		1667.		2870.	3262.		2898.		<b>1</b> 503.	
1027:	926.	580.	407.	335.	268.	269.	248.	238.	244.	
1117:	: 653.	737.	787.	803.	737.	784.	1135.	2581	7479.	
1126:	17659.	29936.	38057.	38472.	34225.	19271.	8004.	2219.	454.	
1135	208.	177.	135.	131.	132.	127.	101.	139.	129.	
1301:	: 56.	63.	77.	51	67.	56.	42.	61.	35.	
131.0	45.	54.			93.		83.		62.	
131.9	56.	61	57.	47.		55.	58.		54.	
i	F	ULSE-P	ILE-UP C	ORRECTE	D DRTA.	CORRECT	riom =			
PK IT	r ener	IGY 1	RREA	BKGND	FWHM	CHRNNEL	L.E.F.T F	°W CTS∕	SEC %E	RR
1. 1	L 511.	00 21	3556.	6793.	3. 17	1.022. 41	1011	26 3.426	E 01. 0.	q
2 4	1 559.	48	3234.	2331	2. 53	11.19. 29	1.111	34 5. 390		
3 4	1 564.	12 19	6526.	1744.	2. 33	11.28. 56		34 3. 275		
4 1	l 602.	78	501.1.	1335.	2. 31	1205.83	1198	17 8.352		
5 :	l. 645.	87	506.	1144.	2. 99	1.291, 94	1286	22 8. 432		
		.01101								-

2.34

1314.17 1308

12 3.609E-01 18.1.

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q182

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 4693.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1456:27 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 614. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

### UNKNOWN SAMPLE REPORT

1

657.71

146.

650.

ELEMENT		EKGND		CONCEN		L SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1	715. 1.	09527.	Ø. 844	8	0. 0029	0. 3
• 1009: 159. 1018: 564. 1027: 477.	865. 1.	<b>149. 15</b> 88.	1722.	1690.	1.489.	1.1.63.	779.
1117: 328. 1126: 8811. 1135: 76.	15277. 19	415. 394. 264. 19940. 58. 50.	16202.	424. 9926. 58.	3989.		1.76.
1301: 30. 1310: 29. 1319: 26.	27. 25.	15. 27. 29. 45. 21. 32. UP CORRECTI	42. 21.	57. 25.	38. 24.	35. 29.	46.
	:GY FIREA			CHANNEL			SEC ZERR
<ul><li>1. 1 51.1.</li><li>2 6 559.</li><li>3 6 564.</li></ul>	54. 1958		2, 87	1022. 42 1119. 36	1107	28 1. 7941 34 3. 2641	E 00 3.3
• 4 1. 602. 5 1 645.	79 2733 72 200	. 876. . 428.	2. 32 2. 34 2. 63	1128.59 1205.86 1291.65	1.195	34 1. 6751 31 4. 5561 16 3. 3371	··· ··· · ·

2. 62

1315.60 1302

23 2.433E-01 26.0

\*\*\*\*\*\*\*\* 18 DEC 1979 8:43:11 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC:79 1017:00 SAMPLE IDENTIFICATION: Q1.8:4A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7978, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TRB1.

:

ACQUISITION DATE: 17DEC79 1506:53 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GEL1-8

\* LIBRARY: NUCL. LIB1 260CT79 1.434:06 \* ENERGY TOLERANCE:

DATE CALIBRATED: KEV/CHNL:

OFFSET:

0.5003803

-0.5932283 KEV

1. 750KV \* HALF LIFE RATIO: 8.00

\* REUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

657. 07

197.

ELEMENT	PEAK ENERGY	BKGI	ND I	FIREA	CONCE	YTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 1. 657. 1.	60: 12: 5:	27. 15:	5337. 9876. 197.	0, 04: 0, 79: 0, 00:	18	0. 0006 0. 0023 0. 0010	1. 2 0. 3 19. 0
• 1009: 244. 1018: 852. 1027: 703.	1.215.	233. 1727. 335.	258. 2163. 248.	278. 2505. 247.	2443.	336. 2137. 200.	1705.	554. 1140. 195.
1117: 556. 1126:14306. 1135: 156.	24339.	666. 31275. 123.	658. 31.277. 84.	664. 25647. 1.02.		950. 6475. 94.	1651.	5917. 351. 97.
<ul><li>1310: 41.</li><li>1319: 52.</li></ul>		66. 43.	67. 50.	36. 80. 42. D DATA.	84. 40.	74. 39.		
PK IT ENER	RGY AR	REFi I	BKGND	F-ЫНМ	CHANNEL	LEFT F	°W C:T'S/	SEC %ERF
<ul> <li>1 1 511.</li> <li>2 4 559.</li> <li>3 4 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	49 33 12 1598 76 40	:90. :76. :88.	6069. 2104. 1227. 1095. 634.	3. 18 3. 03 2. 32 2. 32 2. 33	1022. 45 1119. 31 1128. 56 1205. 79 1291. 97	1.1.09 1.1.09 1.1.95	28 2.556 32 5.650 32 2.665 20 6.813	E 00 2.6 E 02 0.3 E 00 1.9
		awa.	₩	· · · · · · · · · · · · · · · · · · ·	الأثر بلاحتشاد	1.200	12 4.240	E-01 15 0

2.28

1314.32 1307

14 3.280E-01.19.0

599.

# 91119065 RF LEAD-SECOND 1RRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q184B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8278.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:-[<

:4:

: 1:

ACQUISITION DATE: 17DEC79 1517:28 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NOR ITERATIONS: 10.

**>** 

DETECTOR: GELI-8: \* LIBRARY: NUCL. LIB1.

'DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## \_UNKNOWN SAMPLE REPORT

645, 85

657.20

1

302.

206.

871.

655.

ELEMENT.	PERK ENERGY	FKGND	) F	REA	CONCE		1 SIGMA ERROR	ZER	ROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1	5652 1687 655	'. 169	936.	0. 049 0. 812 0. 005	272	0. 0006 0. 0023 0. 0010		1. 2 0. 3 8. 9
• 1009: 228. 1018: 864. 1027: 747.	1.306.	1.855.	2336.	301. 2602. 241.		336. 2200. 197.	385. 1819. 206.	572. 1177. 219.	
1117: 633. 1126:15166. 1135: 160.	683. 26082. : 113.	701. 33404. 3 128.	688. 3749. 114.	697. 26997. 106.	16533.		2261. 1871. 102.	6394. 412. 103.	
• 1301: 43. • 1310: 61. • 1319: 45.	42. 51.	53. 46.	84. 44.	79. 40.	63.	67. 51.	75. 42.	38. 56. 47.	
• PK IT ENER	ULSE-PILI GY FIRI		GND	FWHM	CORRECT			SEC	XERR
<ul> <li>1 1 511.</li> <li>2 5 559.</li> <li>3 5 564.</li> <li>4 1 602.</li> </ul>	44 300 1.1 1.699:	58. 2 36. 1	2440. .687.	3. 19 2. 67 2. 31 2. 37	1.022. 41 1119. 21 1128. 55 1.205. 80	1.111 1.111	23 2.6681 55 5.1131 55 2.8321 18 7.4791	E 00	1. 0 2. 9 0. 2 1. 8

2. 39

2. 69

1291.90 1265

1314.58 1308

17 5.031E-01.15.0

14 3.436E-01 18.9

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 8:45:31 AM 40444444444444444444444 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q1840

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10298.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1528:06 \* FWHM(1.332) 2.390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GELI-8

\* LIBRERY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00

OFFSET:

1. 759KV

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

656.95

309.

686.

ELEMENT		PEAK ENERGY	BKG	ND I	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMO %-ARSENI	JM'Y'	511. 0 564. 1 657. 0	93: 1.5: 6	97. 21	9021. 0128. 309.		93	0. 0005 0. 0021 0. 0009	1. 1 Ø. 3 1.3. 4
• 1009: 1018: : 1027:	297. 1025. 930.	308. 1547. 594.	309. 2115. 421.	289. 2876. 344.	352. 3048. 291.	31.08.	2610.		1500.
1117: 1126:19 1135:	709. 9152. : 231.	844. 32428. 206.	853. 41073. 159.	878. 40995. 158.	781. 32720. 133.	20261.	1175. 8647. 152.	2647. 2320. 140.	7935. 519. 144.
	56. 51.	74. 54.	81. 56.	47. 107. 53. ORRECTE	101. 68.	109. 57.	53. 85. 57. TION =	48. 81. 35. 1. 900	61 60. 51.
PK IT	ENERG'	ት <b>የ</b> F	(EF)	BKGND	FЫНМ	CHANNEL			SEC: %ERR
1 1 2 4 3 4 4 1 5 1	511. 00 559. 30 564. 10 602. 70 645. 83	4 38 0 2101 6 54	)48. .28. !71.	9323. 2173. 1597. 1360. 747.	3. 15 2. 44 2. 33 2. 30 2. 10	1022. 42 1119. 02 1128. 53 1205. 79 1291. 98	1108 1108 1198	33 3.170 31 6.414 31 3.502 17 9.119 12 6.442	E 00 2.4 E 02 0.2 E 00 1.7
ور سو					*****		liin 'm.' * *	white the Transfer	"

2. 62

1314.10 1308

13 5.146E-01 13.3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 8:46:42 AM \*\*\*\*\*\*\* 

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 01.85

TYPE OF SHMPLE: UNKNOWN

SAMPLE QUANTITY: 3972, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TREM

:4:

ACQUISITION DATE: 17DEC79 1544:50 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO:

8.00 OFFSET: -0.5932283 KE.V \* RBUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

657.09

778.

ELEMENT	PEI ENEI		GND	AREA	CONCE	NTR.	1 SIGMA ERROR	ZERF	ROR
%-COPPER			717.	946.		53			<b>∋.</b> 7
%-ANTIMON %-ARSENIC			988. 25 581.	5717. 778.	2. 56: 0. 04:	1.8 1.8	0. 0063 0. 0035		3. 2 3. 4
		53. 306.		311.		324.		312.	
	41. 3. 46. 2:			435. 331.		445. 289.		366. 281.	
1117: 15				1454.	1.305.	1.512.	3475.	9765.	
1126:228   1135: 3	60. 401! 27. 2:			40191. 206.		1.0391 201.		663. 172.	
	73. (	59. <b>6</b> 3.	76.	59.	61.	50.	76.	58.	
	75. : 65. :			200. 57.		170. 68.	150.	97. 82.	
<b>k</b>		-FILE-UF (						wa.	
PK IT E	NERGY	FIREA	BKGND	FWIM	CHEMNEL	LEFT F	PW CTS/	SEC %	(ERR
		946.	3717.	2. 95	1022. 95	1017	12 1. 576	E 00 S	). 7
		9386.	2636.	2. 48		1107	33 1.564		L. 3
		255717.	1.988.	2. 33	1128. 52		33 4. 262		3. 2
		6759. 609.	1880. 941.	2. 29 3. 05	1205, 75 1291, 88		20 1. 127 15 1. 015		L. 5 3. 2

2.56

1314.37 1304

25 1. 296E 00

8. 3

1.681.

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q186A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11166.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

ACQUISITION DATE: 17DEC79 1555:35 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:}:

manufaction to the fact of the

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE:

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:40

#### UNKNOWN SAMPLE REPORT

1.

657, 25

256.

875.

ELEMENT	PEAK E.NERGY	BKG	4D 1	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 3		3 <mark>7. 23</mark> :	4030. 9381. 256.	0. 057 9. 854 9. 004			1. 0 0. 2 17. 6
• 1009: 333. 1018: 1272. 1027: 1110.	338. 1868. 700.	356. 2771. 506.	378. 3506. 398.	388. 3855. 326.	394. 3851. 309.	479. 3354. 309.	2566.	790. 1.753. 2.95.
1117: 685. 1126:21796. 1135: 276.		897. 46684. 199.	46561	884. 37366. 155.	23048.	1351. 9777. 172.	2736.	8949. 584. 143.
• 1301: 86. • 1310: 71. 1319: 71.	79.	76. 64.	61. 94. 66. DRRECTE	109. 57.	64.	76. 70.	95. 62.	59. 70. 49.
PK IT ENER			SKGND	FWHM	CHANNEL.			SEC ZERR
<ul> <li>1 1 511.</li> <li>2 4 559.</li> <li>3 4 564.</li> <li>4 1 602.</li> </ul>	37 35 10 2393 80 64	:71. :81. :01.	771.6. 2430. 1837. 1648.		1022, 40 1119, 07 1128, 53 1205, 86	1107 1107 1196	24 4.005 37 6.618 37 3.990 19 1.067	E 00 2.4 E 02 0.2
5 1 645.			1020.	2. 02	1292.00	1286	13 5. 767	E-01 14.1

2. 68

1.314.69 1.309

14 4.268E-01.17.5

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q186B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9268.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1606:22 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

ele:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:

#### UNKNOWN SAMPLE REPORT

657.13

224.

556.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR	1 SIGMA ERROR	XERROR:
%-COPPER %-ANTIMONY %-ARSENIC	511. Ø 564. 1. 657. 1	7047. 1451. 556.	1.9203. 190483. 224.	0. 0558 0. 8207 0. 0052	8. 0996 8. 0922 9. 0909	1. 1 0. 3 16. 3
• 1009: 277. 1018: 993. 1027: 877.	300. 1.555. 558.	2116. 28	:06. 302. :24. 3100. :26. 248.	3140. 2	353. 451. 654. 2088. 218. 255.	697. 1.432. 225.
1117: 569. 1126:17093. 1135: 179.	642. 29453. 3 150.	7212. 36S	°00. 741. 95. 29903. 117. 112.	1.8566. 7	125. 2453. 922. 2164. 129. 110.	6894. 538. 116.
• 1301: 57. • 1310: 44. 1319: 48.	66. 39. 54. ULSE- PILE	70. 42.	50. 55. 58. 76. 52. 51. CCTED DATA	85. 44.	44. 33. 69. 66. 34. 57. N = 1.000	44. 49. 47.
PK IT EMER	GY ARE	A BKGN	ID FWHM	CHRNNEL LE	FT PW CTS/	'SEC ZERR
<ul> <li>1 1 511.</li> <li>2 10 559.</li> <li>3 10 564.</li> <li>4 1 602.</li> </ul>	68 301 11 19048	5. 11.0 3. 145	i0. 1. 31 i1. 2. 33	1022. 43 10 1119. 69 11 1128. 54 11 1205. 80 11	09 32 5.025 09 32 3.175	5E 00 2.4 5E 02 0.2
5 1 645.		6. 7 <i>2</i>	26. 2. 1.0	1291. 83 1.2	86 12 4.931	LE-01 14.1

2.78

1314.45 1309

13 3.742E-01 16.3

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DFC79 1017:00 SAMPLE IDENTIFICATION: Q186C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8736.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

\*

ACQUISITION DATE: 17DEC79 1617:00 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR TYERATIONS: 10.

74

:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

:4:

### UNKNOWN SAMPLE REPORT

657, 29

177.

649.

•	ELEMENT	• *********************************	F'EAK ENERG'	, BKC	iMD	AREA	CONCE	NTR.	1 SIGMA ERROR	ZER	ROR
•	%-COPPE %-ANTIN %-ARSEN	10NY	564.		134. <b>1</b> 7	8310. 6848. 177.	0.80:	99	0. 0006 0. 0023 0. 001.0		1. 1 0. 3 1. 7
•	1009: 1018: 1027:	253. 926. 826.	225. 1474. 574.	2060.	267. 2576. 269.	290. 2872. 260.		2438.		639. 1431. 232.	
•	111.7: 1126:1 1135:	.5590.	625. 27225. 1.23.	34831.	677. 35054. 113.	700. 27967. 117.	17163.	1052. 7300. 117.	2082.		
		43. 37.	52. 53. 48. ULSE-P	47. 34.	61.	72. 46.	51. 71. 47. CORREC	80. 28.	37. 55. 58. 1. 000		
	PK IT	ENER	iGY i	REA	BKGND	FWHM	C:HANNEL	L.EFT I	°W CTS∕	'SEC:	%ERR
	1 1 2 10 3 10 4 1	511. 559. 564. 602.	70 ; 11 1.70		7208. 1103. 1434. 1216.	3. 18 1. 31 2. 30 2. 32	1022, 43 1119, 73 1128, 55 1205, 79	1.111 1.111	31. 3. 052 30 4. 797 30 2. 947 19 8. 037	'E 00 'E 02	1.0 2.5 9.2 1.8
	5 1	<u>645</u> .		319.	697.	2. 51	1292.03	1287	1.4 5. 313		3. 0

2.48

1314.77 1309

15 2.952E-01.21.7

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q187A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12924.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

4:

ACQUISITION DATE: 17DEC79 1627:39 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

has a sufur forms "most about" "most form 2 for 3 for 1 for 1 for 2 for

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* MALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

### UNKNOWN SAMPLE REPORT

657. 09

694.

849.

ELEMENT		PERI ENERI		GIND	AREA	CONCE	VTR.	1 SIGMA ERROR	ZER	RROR
X-COPPER X-ANTIMONY X-ARSENIC		564.	4. 1. 1.744.		1.4870. 23322. 604.	Ø. 692	16 26 32	0. 0018		1. 3 0. 3 8. 0
1009: 1018: 1027:	364. 878. 747.	33: 127: 52:	3. 327 0. 1789	'. 335 ). 2290	. 316. . 2471.	372. 2487.	-e. 409. 2229. 289.	488. 1733.	632. 1.151.	
1117: 1126:2 1135:	9189.	141! 3469: 22:	2. 43760	). 1329 ). 43085 ?. 161	. 35081		1321. 9091. 152.	2538.	8587. 566. 141.	
1301: 1310: 1319:	74. 81.	6	3. 125 4. 70	6. 128 ). 57	. 173.	67.	141. 71.	109. 54.	69. 68. 50.	
PK IT	ENER		AREA	BKGND	FWHM	CHANNEL.	LEFT F		SEC	%ERR
1 1 2 3 3 3	511. 559. 564.	27		6975. 2310. 1744.	3. 12 2. 51 2. 33	1022. 43 1118. 87 1128. 53	1.108	23 2.478 32 1.137 32 3.722	E 01	1. 1 1. 6 0. 2
4 1 5 1	602. 645.		5940. 423.	1475. 942.	2. 2.7 2. 50	1205.79 1292.19		17 9.901 14 7.048		1.6 11.4

2. 50

1314.37 1308

15 1.006E 00

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q187B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9631.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1638:25 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1

## UNKNOWN SAMPLE REPORT

5

1

1.

646. 86

657.09

322.

415.

595.

619.

ELEMENT	PEAK ENERGY	BKGNE	) F	IREFI	CONCE		1 SIGMR ERROR	%EF	ROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1	1381	l 164	1240.	Ø. 684	84	0. 0020		0. 3
	977.	267. 1328. 312.	1584.	1873.	1907.	1627.	349. 1.286. 1.84.	878.	
1117: 868. 1126:14647. 1135: 165.	25549.	1.055. 32000. 3 1.25.	32046.	25762.	<b>15</b> 983.	996. 6821. 1 <b>91</b> .	1883.		
• 1301: 49. 1310: 49. 1319: 43.	57. 33.	63. 50.	116. 38.	127. 54.	1.21. 50.	98. 54.	78. 46.	62.	
PK IT ENEK	YULSE-PIL YGY AR		KRECTEL KGND		CHANNEL		1.000 W CTS/:	5E.C	%ERR
1 1 511. 2 3 559. 3 3 564. 4 1 602.	30 45 11 1642 79 45	19. : 40. :	1999.	2. 59 2. 33	1022, 47 1118, 93 1128, 54 1205, 86	1.11.0 1.110	22 1. 8528 32 8. 1988 32 2. 7378 20 7. 6348	E 00 E 02	1.3 1.9 0.2 1.8

3.00

2.25

1292. 32. 1286

1314.36 1307

13 5.372E--01.12.1

15 6.919E--01

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q187C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10080.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

ACQUISITION DATE: 17DEC79 1649:00 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

.

#### UNKNOWN SAMPLE REPORT

656, 92

348.

896.

ELEMEN	T	PEAK ENERG	τ' BKG	ND	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPP		511. ( 564. )			0948. 0968.	0. 939 9. 682		0. 0004 0. 0019	1 4 0. 3
Z-ARSE		656.			348.	0. 007		0. 0012 0. 0010	13. 4
1009:	225.	231		238.	215.	266.	304.	378.	446.
1018:	644.	977.		1729.	1911.		1633.	1229.	823.
1027:	696.	378	299.	248.	221	213.	222.	203.	228.
1117:	968.	1005	1098.	971.	834.	792.	1013.	2171	6384.
	15412.	26040		33590.	26728.	16664.	7297.	1898.	399.
1135:	167.	1.36	1.26.	121.	113.	101.	91	110.	92.
1301:	51.	48	40.	44.	42.	43.	53.	43.	54
1310:		67	. 92.	106.	117.	98.	99.	67.	61.
1319:		34		36.	46.		45.	58.	49.
	F	'ULSE-P	ILE-UP C	ORRECTE	D DATA.	CORRECT	TION =	1.000	
PK IT	ENER	:GY	RREA	BKGND	FWRM	CHANNEL	LEFT F	°W CTS∕	SEC XER
1 1	510.	96 1.	0948.	4872.	3. 03	1022. 33	1.012	21 1.825	E 01. 1.3
2 3 3 3	559.	26	5154.	2141.	2. 65	1118.85		38 8. 591	
		11 17	0968.	1410.	2. 32	1128. 55	1.1.1.0	38 2.849	
4 1.			4686.	1089.	2. 41	1205.82		18 7.810	
5 1	645.	98	443.	793.	3. 1.4	1292. 1.7	1286	19 7.388	E-01 10.2

2.54

1314.02 1308

18 5.794E-01 13.3

# 91119065 RF LEAD-SECOND 1RRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0188

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8304.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 17DEC79 1659:38 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC: \* NOR ITERATIONS: 10.

:-

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4

#### UNKNOWN SAMPLE REPORT

1

657. 84

375.

926.

ELEMENT	PEAK ENERGY	BKGNI	D f	AREA	CONCE		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC		653: 136: 92:	9. 180	3822. 3474. 375.		51		1. 5 0. 3 12. 7
• 1009: 251. 1018: 692. 1027: 580.		1.31.2.		282. 1854. 234.	1870.	1593.	341. 1279. 201.	877.
1117: 889. 1126:16345. 1135: 158.	27804.	1112. 35252. : 121.	351.16.	882. 281.82. 1.23.		1086. 7490. 101.	2078.	
1301: 47. 1310: 46. 1319: 59.	57.	43. 91. 31. E-UP COI	118. 39.	116. 39.	40.	98. 53.	35. 70. 40. 1 000	
PK IT ENER	GY AR	EA EI	KGND	FWHM	CHAMMEL	LEFT F	W CTS/	SEC XERR
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> </ul>	25 53 1.1 1804	72. 74.	6533. 2094. 1369.	2. 71 2. 33	1022. 41 1118. 83 1128. 54	1107 1107	26 1.804 31 8.954 31 3.008	E 00 1.8 E 02 0.2
• 4 1 602. 5 1 645.	93 3	61.	1161. 905.	2. 33 2. 40	1205, 76 1292, 06		18 7.872 18 6.024	E 00 1.8 E-01 12.9

2.19

1314.27 1307

19 6. 245E-01 12. 6

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 8:56:05 AM \*\*\*\*\*\* 4444444444444444444444444444

#### 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DFC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10081...00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 1.7DEC79 1710:16 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC: \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* MER ITERATIONS: 10.

DETECTOR: GEL.I-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

657. 96

243.

693.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR	1 SIGMA R. ERROR	ZERROR
X-COPPER ●X-ANTIMONY X-ARSENIC	564. 1.			Ø. 7595	0. 0005 0. 0021 0. 0003	1, 2 0, 3 16, 7
• 1009: 279. 1018: 908. 1027: 751.	1349.	1822. 23	72. 266. 03. 2595. 01. 260.	2559. :	379. 428. 2201. 1698. 233. 238.	1.186.
1117: 715. 1126:17205. 1135: 192.	29373. 3	896. 8 6685. 367 138. 1	12. 29953.	18117. 7		7211. 496. 121.
• 1301: 52. • 1310: 60. 1319: 32.	54. 36.	71. 43.	91. 96. 51. 54.	56.	76. 71	38. 66. 47.
PK IT ENER					EFT FW CTS/	'SEC ZERR
<ul> <li>1 1 510.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	40 406 10 18959 76 509	2. 218 2. 160 6. 112	6. 2.63 8. 2.34 4. 2.33	1022.36 10 1119.13 11 1128.53 11 1205.78 11 1291.90 13	1.07 35 6.776 1.07 35 3.166 1.98 1.6 8.493	0E 00 2.3 0E 02 0.2
					wa na c. ri	u. o. d

2.48

131.4. 31 1309

14 4.053E-01 16.6

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 01898

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11256.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. 1AB1

: |:

ACQUISITION DATE: 17DEC79 1720:54 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB4.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:-

## UNKNOWN SAMPLE REPORT

657, 29

355.

868.

ELEMENT	PEAK E.NERGY	EKGN	ID I	REA	CONCEN	₹TR.	1 SIGMA ERROR	%ERROR
X-COPPER •X-ANTIMONY X-ARSENIC	564. 1	1.94	lø. 22:		0. 819	98		Ø. 3
• 1009: 330. 1018: 1030. 1027: 951.	1580.	354. 2147. 435.	2732.	3120.	3021.	2526.	501. 1954. 274.	1.416.
1117: 870. 1126:20881. 1135: 258.	35239.	1067. 44085. 167.	43995.		22089.	1331. 9394. 1.66.		632.
1301: 71. 1310: 60. 1319: 61.	eil.	95. 63.	1.05. 59.	119. 56.	1.12. 58.	197. 62.	55.	
PK IT ENER	GY AR	EA E	SKGND	FWHM	CHANNEL	LEFT F	'W CTS/	SEC %ERR
<ul> <li>1 1. 519.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1. 692.</li> </ul>	35 47 10 2280	'30. 152.	7145. 2317. 1940.	3. 09 2. 39 2. 35	1.022.35 1119.03 1128.53	1107 1107	22 3.011 34 7.884 34 3.801	E 00 2.0 E 02 0.2
5 1 645.	94 3		1635. 1133.	2. 29 1. 78	1205. 77 1292. 08		20 1.012 15 5.132	

2.95

1314.76 1308

14 5. 910E-01 1.2. 9

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q189C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8261.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 17DEC79 1731:37 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 699. SEC \* SEMSITIVITY: 4.000 ELAPSED REAL TIME: 622. SEC \* SHOPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* MBR ITERATIONS: 10.

:4

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DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4:

## \_UNKMOWN SAMPLE REPORT

1.

657. 95

301.

494.

ELEMENT	PERK ENERGY				CONCE	ITR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1.	129	9. 168	3301.	0. 047 0. 825 0. 008	ī9	0.0023	
• 1009: 230. 1018: 729. 1027: 683.	260. 1.143. 418.	231. 1567. 327.	1973.	268. 2132. 214.	2151.	1.929.	349. 1.488. 200.	1.054.
1126:15124.			32484.	26708.	758. 16378. 92.	900. 7052. 81.	2007.	6221. 391. 80.
	55. 53. 36. ULSE- PILI	66. 40.	80. 47.	90. 38.	45. 89. 25. CORRECT	70. 36.	44.	50. 53. 5ø.
PK IT ENER			KGND	ғ-шнм	CHFINNEL			SEC XERR
<ul> <li>1 1 511.</li> <li>2 5 559.</li> <li>3 5 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	29 34 11 1683 75 46	33. 01. 1.5.	5175. 1456. 1299. 1070. 1392.		1022, 43 1118, 92 1128, 55 1205, 78 1291, 55	1108 1108 1197	23 2.261 36 5.722 36 2.805 20 7.691	E 00 2.3 E 02 0.2

2.85

131.4. 28 1.308

13 5.017E-01 11.9

# 91119065 RF LEAD-SECOND IRRADIATION

| SAMPLE DATE: 17DFC79 1017:00 | SAMPLE IDENTIFICATION: 0190A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10315.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:¥:

ACQUISITION DATE: 17DEC79 1742:11 \* FWHM(1332) 2.390 PRESET TIME(4 1VE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAFSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

14:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4

#### UNKNOWN SAMPLE REPORT

564.10

602.78

645.84

679, 54

217000.

6055.

384.

190.

3

4

5

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1

1

1.

ELEMENT	PFAK ENERGY BI	GND I	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1 :			0. 0546 0. 8544 0. 0031		1. 1 0. 3 ECTABLE
• 1009: 308. 1018: 1115. 1027: 956.	304. 342 1557. 2180 596. 48:	i. 2700.	334. 3196. 298.	346. 417. 3178. 2729. 285. 239.	. 2144.	1.501.
1117: 629. 1126:19718. • 1135: 226.		4. 801. 2. 41849. 1. 163.		899. 1195 20961. 9112 145. 149	. 2576.	8277. 582. 123.
● 1310: 75. 1319: 63.		3. 72. 3. 59.	82. 59.		. 66. . 69.	49. 56. 51.
PK IT ENER	GY AREA	BKGND	FWHM	CHANNEL LEFT		BEC XERR
		7248. 1836.		1022.49 1012 1119.02 1109	24 3. 1.90 37 5. 746	

2.35

2.37

2.17

3.63

1128.54 1109

1205.82 1194

1291.89 1284

1341. 25 1335

1900.

1.419.

21.62.

525.

37 3.617E 02

22 1.009E 01.

31 6.408E-01.17.8

10 3.159E-01.18.6

0.2

1.6

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q1908

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9384.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

:4:

ACQUISITION DATE: 17DEC79 1752:54 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 4.000
PELAPSED REGET TIME: 627. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 9.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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## UNKNOWN SAMPLE REPORT

657. 07

193.

484.

ELEME	ENT	• • <del>• • • • • • • • • • • • • • • • • •</del>		EAK ERGY	EK(	GND	· Formure analy	AREA	CON	ICE!	ITR.		51.GN RROF		%E	RRC	)R
%-cor %-anï	ľľ	IONY		11. 0 64. 1		969. 541.		7229. 0658.	*	054 870	15 11.		993 998			1. Ø.	
X-ARS	SE'N	IIC	6	57. 1.		484.		193.	0.	994	16	Ø.	999	98		1.7.	7
1999		303.		286.	280.		Ø6.	284	36		396		469		649	•	
1018 1027		962. 864.		361. 535.	2015. 368.		07. 16.	2658. 253.	279 22		2478 243		1871 222		1272 249		
1117		577.		670.	733.	. 7	11.	683.	81	.0.	1.187	'. <i>:</i>	2669	9. 7	7593	: :	
1120 1135		.8043. 219.		661 140.	38756. 11.9.		46. 28.	31.659. 102.			8682 132		2418 105		505 102		
130:	<b>i</b> :	60.		44.	51.		59.	38.	4	-8.	E,E	i.	4	<b>4</b> .	48	<b>)</b> .	
<b>)</b> 1310 1319		4 <i>6.</i> 39.		56. 45.	56. 54.		64. 42.	95. 45.		3. 6.	69 51	-	47 46		51 53		
			'ULS		E-UP						riow =		999		**************************************	••	
PK :	I T	ENER	:CiY	AF	REA	BKGN	ID	FWHM	CHANN	ÆL	LE:FT	РЫ	C"	rszsi	EC	ΧE	ERR
1	:1.	511.			229.	596	9.	3. 13	1022.			23		371E	01	1.	Ø
2	5	559.			<del>1</del> 37.	222		2. 88	1119.			30		729E	99	2.	5
3	5	564.		2006		154		2. 35	1128.		1109	30		344E	02	Ø.	
4	1	602.			124.	1.34		2. 33	1205.		1195	19		340E:		: <b>1</b>	7
5	1.	645.	78	-	388.	72	:8.	2. 30	1291	76	1285	14	6.	468E	• 01	11.	1_

2. 1.3

1314.32 1309

11 3.215E--01 17.7

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 01900

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9476.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE WAME: FFF. TAB1

:1:

ACQUISITION DATE: 17DEC79 1803:33 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1:

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:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

:k:

## UNKNOWN SAMPLE REPORT

645, 89

ELEMENT	PEAK ENERGY	BKGI	4D f	AREA	CONCE		1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 1. 657. 4	796 16: 73		71.73. 1.045. 0. <	0. 954 0. 821 0. 903	L9	0. 0006 0. 0022 NOT DET	1. 2 0. 3 ECTABLE
1009: 271. 1018: 898. 1027: 819.		248. 1906. 362.	287. 2442. 289.	304. 2833. 262.	312. 2732. 262.	358. 2459. 224.	445. 1879. 239.	568. 1377. 209.
1117: 553. 1126:16993. 1135: 191.	656. 29251. 1.27.	733. 36448. 1.17.	692. 37284. 120.	608. 30220. 111.	754. 18861. 108.	1.100. 8094. 112.	2544. 2363. 120.	71.48. 491. 106.
1301: 59. 1310: 47. 1319: 49.	59.	45. 59. 35. E-UP C	40. 75. 37. DRRECTEI	42. 69. 47. D DATA.	33. 74. 44. CORRE.C	54. 71. 38. FION =	50. 53. 41. 1. 000	42. 55. 48.
PK IT ENE	RGY AF	REA I	BKGMD	FWHM	CHANNEL.	LEFT P	W CTS/	SEC %ERR
<ul> <li>1 1 511.</li> <li>2 1 527.</li> <li>3 3 559.</li> <li>4 3 564.</li> <li>5 1 602.</li> </ul>	56 1 46 29 12 1910	.37. 984.	7968. 2463. 1989. 1611. 1579.	3. 15 1. 69 2. 58 2. 35 2. 29	1022, 50 1055, 51 1119, 25 1128, 57 1205, 84	1.052 1.109	32 2. 862 12 2. 278 33 4. 973 33 3. 184 22 8. 501	E-01 52.1 E 00 2.8 E 02 0.2
.000 .0 .000								mm min man

2.49

1291. 80 1286

1.4 5. 912E-01 11. 9

718.

355.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 9:03:10 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q191.A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9958. 000 UNITS: UG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 17DEC79 1814:11 \* FWHM(1332) 2.390 PRESET TIME.(LIVE): 600. \* SENSITIVITY: SEC 4.000 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PERK ENERGY	BKGND	AREA	CONCEN		1. SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 0		3363. 2184. 287.	0. 040 0. 747 8. 006	<b>'</b> 3	0. 0005 0. 0021 0. 0009	1.3 0.3 14.3
• 1009: 251. 1018: 768. 1027: 684.	11.65. 1	258. 260. 548. 1896. 306. 274.	272. 21.64. 237.	291. 2225. 212.	341. 1878. 230.	393. 1479. 192.	486. 1.097. 238.
1117: 706. 1126:16154. 1135: 172.	27888. 35	902. 849. 140. 35295. 119. 124.	775. 28327. 109.	784. 18287. 103.	1071. 7751. 93.	231.6. 2198. 1.1.0.	6836. 471. 92.
• 1301: 47. 1310: 47. 1319: 46.	46.	39. 37. 65. 95. 41. 40. UP CORRECTE	43. 95. 57. D DATA.	49. 85. 36. CORRECT	43. 72. 45.	44. 73. 41. 1. 000	55. 52. 44.
PK IT ENER	GY AREA		FWHM	CHANNEL	LEFT F		SEC ZERR

		A 1	had 45-01-7-01-1	THAMET	CONTRACT	r Muli	CHUMMET FE	m i mu	CIBYBEL	AERK
•	1	1	511. 02	13363.	5395.	3. 23	1.022. 46 10	11 22	2. 227E 01	1. 2
	2	3	559. 34	4016.	1.991.	2, 50	1.119. 02 11	1.0 36	6. 694E. 00	2. 2.
	3	.3	564. 12	182184.	1574.	2. 35	1128.56 11	10 36	3.036E 02	ø. 2
	4	1.	602. 75	4936.	1216.	2. 34	1205. 77 11.	95 19	8. 226E. 00	1 7
	5	:1_	645. 97	305.	750.	2. 35	1292.14 12	84 1.5	5. 079E-01	13. 9
	6	1.	657. 03	287.	693.	2. 51	1314. 24 13	94 17	4. 776E-01	1.4. 3

\*\*\*\*\*\* 18 DEC 1979 9:04:22 RM \*\*\*\*\*\*\* 

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

9431.000 SAMPLE QUANTITY: UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 17DEC79 1824:50 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 690. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

657, 26

310.

660.

ELEMENT	PEAK ENERGY	BKG	ND I	AREA	CONCE		1 SIGMA ERROR	ZERRI	OR 
%-COPPER	51.1. Ø 564. 1.	64. 16		2671. 7979	0. 041 0. 798	l.1. 24	0. 0006 0. 0022		. 4 . 3
X-ARSENIC	<b>657.</b> 3			310.			0.0010 0.0010	13.	
1009: 24	t. 245.	271	263.	269.	277.	342.	389.	485.	
1018: 729	). 1099.	1517.	1830.	2174.	2093.	1800.	1429.	1.016.	
1027: 67: '	3. 424.	326.	276.	275.	237.	233.	193.	206.	
1117: 79	3. 863.	888.	885.	789.	799.	1.030.	2452.	6949.	
1126:1666:	l 27955.	35561.	35329.	28721.	18234.	7968.	2248.	420.	
1135: 17:	L. 152.	129.	119.	115.	103.	1.21.	111.	112.	
1301: 34	4. 44.	54.	47.	53.	42.	46.	47.	49.	
131.0: 54	<del>1</del> . 55.	77.	70.	88.	113.	72.	49.	64.	
1319: 49	9. 41.	39.	49.	42.	34.	50.	45.	34.	
•	PULSEP11	_E-UP C	ORRECTE	D DATA.	CORRECT	riom =	1 000 `		
PK IT EN	ERGY A	REA	BKGND	FWHM	CHRINNEL	LEFT F	W CTS/	SEC %	ERF
1 1 51:	l. 00 12	571.	6446.	3. 1.5	1.022. 41.	1011	27 2. 11.2	E 01. 1.	. 3
	9. 27        41	<i>3</i> 26.	1250.	1 36	11.18. 88		27 6. 709		. 0
3 10 56	4. 1.1	939.	1669.	2. 36	1128. 55	1111	27 3.066		. 2
	2, 78 51	<i>3</i> 06.	1240.	2. 39	1.205.83	1.194	20 8.343		. 7
5 1. 645	5. 75 ·	448.	676.	2. 94	1.291. 71.	1286	16 7.461	E-01 9	. 5

2.55

1314.71.1307

15 5.165E-01 13.0

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0191C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9965.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:1:

:4:

:4:

ACQUISITION DATE: 17DEC79 1835:28 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

man adar lama in a ta a familian da maria a familia a familia a familia a familia a familia a familia a familia

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

657. 21

331.

1013.

ELEMENT	PEAK ENERGY	BKGN	D F	AREA	COMCEN		1 SIGMA ERROR	%ERROF	₹
X-COPPER •X-ANTIMONY X-ARSENIC	511. 0 564. 1 657. 2	604 198 101	1. 210	1284. 3484. 331.	0. 044 0. 866 0. 007	50	0. 0006 0. 0023 0. 0011	1. 3 0. 3 1.4. 7	3
• 1009: 319. 1018: 919. 1027: 756.	283. 1224. 458.	293. 1613. 339.	317. 2157. 313.	271. 2439. 286.	2423.	375. 2009. 244.	1604.	555. 1164. 269.	
1117: 798. 1126:18760. 1135: 207.	989. 32024. 153.	1020. 40222. 168.	40874.	937. 33194. 139.	21067.	1271. 901.8. 1.23.		7841. 580. 1.36.	
1301: 67. 1310: 55. 1319: 61.		47. 86. 51. E-UP CO	103. 39.	55.	130. 46.	97. 51.	83. 61.	65. 73. 49.	
PK IT ENER	:GY FIR	EA B	KGND	FWHM	CHANNEL			SEC %ER	R
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> </ul>	39 44 12 2194	94. 84.	6049. 2515. 1981. 1572.	3. 10 2. 55 2. 36 2. 41	1022. 44 1119. 11 1128. 57 1205. 81	1111	23 2.381 32 7.339 32 3.508 19 9.825	E 00 2.2 E 02 0.2	2 2
5 <u>1 646.</u>	10 5	<b>1</b> 5.	916.	3. 4.3	1292. 40	1285	16 8, 589		

2. 29

1314.60 1.306

18 5. 520E-01 14. 7

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DFC79 1017:00 SAMPLE IDENTIFICATION: Q192

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8390.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1846:11 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

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پیسی بود و مندو پیسی موده په دو موده داده

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4

1. 750KV

# UNKNOWN SAMPLE REPORT

1

657. 10

290.

725.

ELEMENT		PEAK EMERGY	' BKG	3MD	AREA	CONCE	YTR.	1 SIGMA ERROR	%ERROR
X-COPPE X-ANTIM X-ARSEN	ON'Y	511. ( 564. : 657. :	. 13		1062. 9663. 290.	9. 94: 9. 78: 9. 99:		0. 0006 0. 0023 0. 0012	1. 4 0. 3 14. 5
1009: 1018: 1027:	1.99. 644. 591.	214. 955. 386.	241. 1290. 303.	231. 1.625. 216.	241. 1929. 206.	1852.	301 1543. 195.	1253.	387. 929. 189.
11.17: 1126:1 11.35:	611. 4197. 170.	742. 24229. 113.	737. 30811. 95.	710. 30640. 109.	732. 25440. 70.	15928.	884. 6903. 96.	1966.	5704. 436. 80.
1301: 1310: 1319:	41. 30. 39.	29. 51. 39. ULSEP	60. 49.	34. 86. 31. ORRECTE	31. 86. 31. D DATA.	84. 34.	40. 70. 32. 110N =	67. 33.	42. 45. 40.
PK IT	ENER		KEA	BKGND	FWIM	CHFINNEL			SEC %ERR
1 1 2 4 3 4 4 1 5 1	511. 559. 564. 602. 645.	36 12 159 78 4	1.062. 3262. 9663. 4390. 288.	4730. 1573. 1375. 1024. 581.	3. 13 2. 19 2. 35 2. 36 2. 48	1022, 44 1119, 06 1128, 58 1205, 82 1292, 15	1111 1111 1197	22 1.844 31 5.436 31 2.661 17 7.317 14 4.804	E 00 2.5 E 02 0.3 E 00 1.8
				************	3m-s 3 'ma'	and desired from a set that	anter Stime Parel No. 1	4 T. UNT	im train alaste st

2. 61

1.314. 39 1304

20 4.834E-01 14.4

# 91119065 RF LEAD-SECOND TRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0193A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7935.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1856:45 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NOR ITERATIONS: 10.

**>** 

رندر مها و منورستي پانو پسېدينونو در منو و منورستي

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 2 00

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

1

657. 22

315.

71.9.

ELEMENT	PEAK ENERGY	BKGN	ID f	REA	CONCEN		1 SIGMA ERROR	%ERROR
X-COPPER  X-ANTIMONY X-ARSENIC	564. 1.	413 110 71	18. <b>1</b> 38		0. 718		0. 0022	1. 5 0. 3 13. 4
		195. 1081. 233.	1342.	1548.	1526.	1.360.	262. 1.026. 168.	737.
1117: 638. 1126:12261. 1135: 119.	21079.	805. 26543. 91.	26715.	22010.	620. 13756. 82.		1740.	51.12. 342. 65.
• 1301: 27. 1310: 32. 1319: 31.	38.	39. 57. 33. E-UP CO	61 36.	93. 24.	30.	65. 38.	63. 34.	41.
PK IT ENER			KGND		CHANNEL			SEC ZERR
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	31 37 12 1385 75 37	05. 61. 1.6.	4137. 1460. 1108. 916. 508.	3. 15 2. 59 2. 36 2. 30 3. 31	1022. 43 1118. 95 1128. 58 1205. 77 1291. 44	1110 1110 1117	21 1.505 28 6.176 28 2.309 17 6.193 14 4.576	E 00 2.2 E 02 0.3 E 00 2.0

2.31

1314.63 1307

25 5.242E-01 13.3

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q193B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 4479.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

:4:

ACQUISITION DATE: 17DEC79 1907:15 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 611. SEC \* SHOPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8 00

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* RBUNDANCE LIMIT: 85.00%

:1:

## UNKNOWN SAMPLE REPORT

657. 25

ELEMENT	PEAK ENERGY	BKGND	FIREA	CONCENT		SIGMA RROR	%ERROR
X-COPPER X-ANTIMONY X-ARSFNIC	564. i	2180. 496. 250.		0. 0350 0. 7282 0. 0088	Ø.	0007 0028 0014	2. 0 0. 4 15. 3
<pre>1009: 104. 1018: 327. 1027: 266.</pre>	398.	613. 7	.30. 106. '97. 871. .23. 98.	911.	1.17. 779. 102.	538. 4	15. 09. 97.
1117: 357. 1126: 6892. • 1135: 50.	11914. 1		:95. 379.  33. 1.2724.  29. 39.		448. : 3527. 34.	961 2	61. 03. 33.
● 1301: 23 ● 1310: 19 1319: 9	23. 1.7.	25. 31. 15. :-UP COPPE	47. 45. 1.8. 15.	54.	48. 18.	24.	25. 28. 17.
PK IT ENE				CHANNEL L			ZERR
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	. 31	.6. 84 )7. 49 12. 45	11. 2.76 96. 2.33 56. 2.37	1022, 45 1 1118, 96 1 1128, 60 1 1205, 87 1	107 31 107 31 195 19	3. 693E 0 1. 318E 0 3. 503E 0	
and the first parties of the second			14. 3.91.	1291. 71 1	204 10	4. 329E-0	1 10.0

2.42

1314.69 131.0

13 2.825E-01 1.5.3

250.

170.

\*\*\*\*\*\*\*\* 9:10:17 AM \*\*\*\*\*\*\*\* 

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5517, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1917:38 \* FWHM(1332) 2.399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

304.

21.5.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 1.. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1

656, 96

ELEMENT	PERK ENERGY	BKGMD	F	IREA	CONCEN	ITR.	1 SIGMA ERROR	ZER	ROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1.		96			23	0. 0007 0. 0026 0. 0012		1 8 0. 4 9. 0
• 1009: 120. 1018: 345. 1027: 349.		811.	994.	1080.	164. 1094. 114.	878.	214. 698. 120.	513.	
1117: 401. 1126: 8414. 1135: 70.		538. 8737. 18 48.	1899.		385. 9720. 59.		121.0.	3472. 269. 41.	
1319: 18.	22.	30. 31. 19. -UP CORF	67. 13.	22.	59. 24.	50. 15.			
PK IT ENER				FWHM	CHRNNEL			SEC	%ERR
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	30 246 13 9647 77 266	4. 10 2. 6 9. 5	)1.2. 775. 104.	3. 08 2. 57 2. 33 2. 31 2. 76	1022. 32 1118. 94 1128. 59 1205. 82 1291. 72	1110 1110 1195	21 1 049 31 4 106 31 1 608 21 4 448 15 4 057	E 00 E 02 E 00	1. 7 2. 7 0. 3 2. 3 1. 9

3. 15

1314.11.1309

13 5.065E-01

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATF: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q194A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8967.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABA

:1:

ACQUISITION DATE: 17DEC79 1928:04 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

5

6

1.

1

1.

638, 68

645.93

657.16

114.

374.

333.

543.

536.

755.

ELEMENT	PERK ENERGY	BKGND		KEFI	CONCEN		1 SIGMA ERROR	ZER	:ROR
%-COPPER %-RNTIMONY %-ARSENIC	511. 1. 564. 1 657. 2	5657. 1373 755	. 1715	806. 555. 333.	0. 037 0. 791 0. 008		0. 0006 0. 0022 0. 0011		1. 5 0. 3 .3. 0
• 1009: 218. 1018: 618. 1027: 571.	892.	210. 1202. 324.	259. 1.456. 229.	252. 1.690. 201	275. 1688. 219.	291. 1520. 202.	361. 1202. 217.	432. 865. 194.	
1117: 772. 1126:15311. 1135: 150.	912. 25954. : 1.35.	916. 33 <u>112</u> 3 1.08.	883. 3208. 2 1.10.	825. 27039. 117.	778. 1.7054. 82.	1038. 7461. 109.	2231. 2226. 99.	6364. 433. 90.	
<ul><li>1310: 53.</li><li>1319: 34.</li></ul>	47. 24. 34. ULSE-PILE	59. 41.	56. 89. 37.	98. 32.	37. 112. 32.	37.	38. 65. 41.	43. 58. 30.	
PK IT ENER					CORRE.CT		1.000 W CTS/	SEC	XERR
1 1 511. 2 3 559. 3 3 564. 4 1 602.	37 459 12 1715	93. 1 55. 1	868. a 373. a	2. 67 2. 35	1022.51 1119.07 1128.57 1205.86	1.1.07 1.1.07	27 1. 71.81 35 7. 6551 35 2. 8591 18 8. 0271	. 00 . 02	1. 4 2. 0 0. 2 1. 7

2. 23

2.95

2.44

1277. 58 1.273

1292.06 1285

1314.50 1303

12 1. 900E-01 30. 4

14 6.228E-01 10.2

19 5.554E-01.12.9

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q194B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6584.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

ACQUISITION DATE: 17DEC79 1938:38 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0%
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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ينهن موسع يمس موسع يرس منعوب و درج يسم . رميس يمس موسع يرس درجو درج معمد

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8 00

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

1

657. 1.3

257.

540.

%-COPPER 511.0 3738. 7688. 0.0382 0.0006 : •%%-ANTIMONY 564.1 930. 124903. 0.7865 0.0025 0.0025 0.0013 14	ROR
	L. 7 3. 3 4. 3
● 1009: 193. 146. 165. 174. 194. 207. 198. 245. 331. 1018: 456. 662. 868. 1144. 1290. 1318. 1088. 842. 661. 1027: 436. 262. 227. 180. 176. 152. 130. 151. 131.	
1117: 552. 634. 671. 627. 557. 520. 679. 1539. 4438. 1126:10905. 18869. 23976. 24092. 19939. 12621. 5411. 1517. 321. 1135: 81. 81. 74. 57. 70. 62. 74. 60. 49.	
1301: 37. 25. 37. 33. 31. 26. 25. 24. 28. 1310: 22. 47. 53. 70. 72. 81. 63. 52. 35. 1319: 31. 28. 25. 25. 26. 28. 30. 34. PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000	
	(ERR
2 3 559.28 3032. 1194. 2.38 1118.90 1108 32 5.054E 00 3 3 3 564.13 124903. 930. 2.35 1128.59 1108 32 2.082E 02	L. 6 2. 4 3. 3 2. 1.

2.45

1314.44 1304

18 4.287E-01 14.2

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q194C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6983.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1949:08 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1:

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4

#### UNKNOWN SAMPLE REPORT

657.13

283.

534.

4

ELEMENT		EFIK ERGY BI	GND	AREA	CONCE		1 SIGMA ERROR	XERROR
%-COPPER %-ANTIMON			51.41. l.426. 16	9887.		57 13	0. 0007	1 6
%-ARSENIC		57. j		283.	0. 33° 0. 009		0.0028 0.0013	0. 3 13. 1
		236. 22	2. 248.	258.	246.	260.	299.	414.
		355. 1182	2. 1506.	1620.	1.572.	1418.	1200.	808.
1027: 4	38. 3	882. 269	9. 237.	233.	206.	1.82.	216.	192.
1.1.1.7: 7:	<b>52</b> . 8	383. 896	3. 868.	733.	719.	981.	2158.	6043.
1126:147:	12. 252	230. 3205:	L. 32445.	26624.	16667.	7447.	2069.	441.
1135: 1	70. j	114. 11.	3. 112.	101	94.	79.	82.	85.
1301:	49.	48. 45	5. 33.	42.	42.	45.	51.	41.
1310:	41.	58. 7.				84.		55.
1319:	32.	45. 4:	L. 47.	52.		34.	40.	37.
i	PULSE	E-PILE-UF	CORRECTE	ED DRTA.				
	NERGY	FIREA	BKGND	FWHM	CHEMNEL	LEFT P	W CTS/	SEC XERF
	11 02	9887.	6141.	3. 27	1.022. 44	1.01.1	29 1. 648	E 01 15
2 3 5	59. 30	4238.	2044.	2. 64	1118.93		28 7. 063	
	54. 1.3	1.67117.	1426.	2. 35	1.1.28. 59		28 2. 785	
	92. 78	4599.	1044.	2. 36	1205.83	1198	18 7.666	
5 1 6	45. 82	289.	556.	2.40	1291.85	1286	13 4.819	

2.27

1.314, 44 1.309

12 4.717E-01 13.0

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0195A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10493.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 17DEC79 1959:43 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB4

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

## UNKNOWN SAMPLE REPORT

645, 84

362.

833.

ELEMENT	PEAK ENERGY	BKGND	AR	EA	CONCEN		SIGMA ERROR	%ERI	ROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1.				0. 061: 0. 739: 0. 002:	2	0.0006 0.0020 NOT DETE	1	1. 1. 0. 3 E
• 1009: 289. 1018: 958. 1027: 882.		2107. 2		278. 3068. 274.	3049.	361. 2614. 232.		638. 1462. 228.	
1117: 364. 1126:16746. 1135: 195.		85702. <u>3</u> 5	475. 924. 2 113.		652. 1.8660. 1.05.	8446.	2361. 2402. 101.	6953. 469. 117.	
• 1310: 45. 1319: 45.	57. 46. 40. ULSEPILE	56. 41. 54. E-UP CORR	42. 30.	45. 41.		43. 38.	30. 29.	44. 48. 47.	
PK IT EMER	GY ARE	A BKG	ND F	ынм сн	HANNEL I	LEFT P	√ CTS/S	JEC :	XERR
<ul><li>1 1. 511.</li><li>2 1. 564.</li><li>3 1. 602.</li></ul>	12 18633	k1. 54	95. 2	. 37 1.1		1118 2	24 3. 201. 22 3. 1.076 22 8. 7046	E 02	0. 9 0. 2 1. 7

2. 73

1291.89 1284 17 6.027E-01.12.5

91119065 RF LEAD-SECOND IRRADJATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q1958

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8478.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

\*

ACQUISITION DATE: 17DEC79 2010:21 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1.	6495. 1 4660. 16 541.	6155.	0. 817 <u>1</u> .	0. 0008 0. 0024 NOT DETI	1. 2 Ø. 3 ECTABLE
• 1009: 243. 1018: 913. 1027: 756.	1332. 1	254. 258. 863. 2366. 386. 279.	253. 2754. 233.	282. 32 2740. 232 207. 20	6. 1856.	587. 1214. 211.
1117: 352. 1126:14761. 1135: 157.	25346. 32	375. 447. 194. 32365. 125. 106.	494. 25893. 98.	16717. 751		
• 1301: 54. 1310: 46. 1319: 39.	40. 57.	41. 48. 42. 35.	35. 38. 37.	39. 3 35. 5	2. 43. 0. 36.	41. 35. 41.
PK IT ENER	GY AREF			CORRECTION CHANNEL LEFT		SEC MERR
1 1 511. 2 1 564. 3 1 602. 4 1 645.	12	i. 4669. l. 1456.	2. 35	1022, 46 1011 1128, 57 1118 1205, 83 1194 1292, 06 1286	20 2.769 25 7.697	E 02 0.3 E 00 1.9

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 01950

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9268.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 17DEC79 2020:56 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

KEYZURNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

1

645.91

210.

594.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1.	601.3. 1 4888. 16 465.	6622.		3	0.0007 0.0022 NOT DETE	1. 1 0. 3 CTABLE
• 1009: 238. 1018: 887. 1027: 779.	1277. 1	256. 265. 904. 2412. 372. 269.	260. 2827. 246.	2701.	353. 2360. 217.		573. 1288. 203.
1117: 350. 1126:14866. 1135: 170.	25437. 32	398. 417. 477. 32187. 117. 113.	524. 25984. 97.		988. 7502. 100.	2252.	6073. 443. 97.
	40. 31.	49. 45. 38. 34. 30. 36. UP CORRECTE	44. 43.	42. 27.	37. 38.		
PK IT ENER	GY AREA	BKGND	FWHM	CHRIMMEL. L	EFT PW	l CTS/S	EC XERR
1 1 511. 2 1 564. 3 1 602.	12 166622	. 4888.	3. 15 2. 35 2. 36	1022, 51 1 1128, 57 1 1205, 93 1	l.118 2	:8 2.873E :1.2.777E :0 7.777E	02 0.3

2. 20

1292.03 1287

12 3.494E-01 17.8

\* 18 DEC 1979 9:18:27 AM \*\*\*\*\*\* 

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q196

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1337, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 17DEC79 2031:29 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE:

KEY/CHNL: 0.5003803

1.. 750KV \* HALF LIFE RATIO: 8. 80

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	FIREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER ●X-ANTIMONY X-ARSENIC	564. 2	1045.	19355.	0. 0870 0. 6058 0. 0105		Ø. 8
• 1009: 36. 1018: 161. 1027: 157.	269.	40. 42 361. 473 46. 48	t. 539.	555. 45	3. 372.	107. 236. 24.
1117: 60. 1126: 1637. 1135: 12.	2952. 3		l. 75. 5. 3234. 7. <b>11</b> .	2018. 86	5. 240. 7. 284. 4. 9.	651. 46. 19.
• 1310: 12. 1319: 13.	12. 9.	13. 8 12. 13	8. 13.	11. 11.	9. <b>14</b> . 8. 5.	
PK IT ENER			ED DATA. FWHM	CORRECTION :		SEC MERR
2 1, 564.	03 3392 15 19355 72 625	. 1045.	2. 29	1022, 46 1012 1128, 63 1120 1205 70 1195	22 3.226E	. 01   0. 8

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q197

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7212.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:+:

ACQUISITION DATE: 17DEC79 2041:48 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

•	ELEMEN	IT	PEAK ENERGY	BKG	ND	AREA	CONCE.P	VTR.	1 SIGMA ERROR	XER	ROR
	Z-COPF Z-ANTI Z-ARSE	MONY	511. 0 564. 1 657. 1	45 15 5	48. 1.4	2623. 7157. 4707.		26 55 90	0. 0005 0. 0026 0. 0035		4. 2 Ø. 3 2. 2
•	1018: 1027:	332.	240. 403. 272.	250. 504. 268.	268. 61.6. 257.	241. 624. 252.	272. 648. 247.	241. 569. 213.		277. 384. 230.	
•	1117 : 1126 :	6773. 13146. 178.	8748. 22328. 155.	9025. 28132. 116.	7427. 281.20. 1.24.	5059. 23452. 134.	2634. 14682. 119.	1477. 6649. 1.35.	1957.	5411. 434. 130.	
•	1301: 1310: 1319:	133. 137.	67. 262. 66. ULSE-PI	66. 505. 57. LE-UP C	71. 815. 29. ORRECTE	47. 941. 52. D DATA.	73. 976. 53. CORREC	69. 753. 57. TION =	512.	79. 210. 54.	
•	PK II				BKGND	FWHM	CHANNEL			'SEC:	ZERR

		•r 1	1 1 1.00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1001.1	DIVIDIAL	t. MUHA	C-CHAIMMET TELL	L.155	CIBYBEL	ALKK
•			511. 01 559. 16	2623. 45311.	4560.		1022. 43 1015			4. 1
•	3	2	564, 13 602, 78	147157. 3949.	1548.	2. 37	1118.66 1107 1128.58 1107	33	7. 552E. 01 2. 453E 02	Ø. 3
	5	1.	645. 85 657. 14		777.	2. 50	1205.83 1195 1291.89 1287	12	6. 582E 00 4. 919E-01	1.4. 6
•	7	3	665. 35	4rer. 363.	553. 557.		1314. 46 1304 1330. 87 1304		7. 845E. 00 6. 052E-01	

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q198

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10404.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 17DEC79 2052:26 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 638. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

-1

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

:1:

#### UNKNOWN SAMPLE REPORT

1

1

657.13

665, 54

7194.

421.

1.840.

1229.

ELEMENT	PEAK ENERGY	BKGMD		REA	CONCER	ITR.	1 SIGMA ERROR	ZEF	RROR
X-COPPER •X-ANTIMONY X-ARSENIC	511. 0 564. 1 657. 1	6642 2962 1840	. 213	580. 180. 104.		97	9. 9994 9. 9922 9. 9934		3. 7 0. 3 2. 1
1009: 385. 1018: 524. 1027: 494.	359. 564. 417.	375. 728. 349.	389. 858. 368.	346. 955. 373.	4 <b>01.</b> 865. 362.	400. 838. 330.	433. 705. 318.	443. 571. 378.	
1117:10070. 1126:19217. 1135: 327.			0883. 0723. 249.	7331. 33376. 227.	3749. 21026. 226.	2336. 9532. 206.	3192. 2903. 209.	8243. 769. 259.	
• 1301: 93. 1310: 199. 1319: 184.	109.	96.	1209. 96.	84. 1.410. 87.	1375. 95.	126. 1174. 82.	741. 83.	127. 392. 105.	
PK IT ENER	YULSEPILE XGY FIRE	,			CORRECT CHANNEL			3EC	ZERR
1 1 510. 2 2 559. 3 2 564. 4 1 571.	15 6573 11 21318	82. 3 80. 2	:552. :962.	2. 36 2. 37	1022.37 1118.64 1128.54 1143.00	1108 1108	18 5. 967 35 1. 096 35 3. 553	E 02 E 02	3. 6 0. 4 0. 2
5 1 602. 6 1 645.	78 602 83 55	25. 2 56. 1	300.		1205.83		9 9. 1.39 18 1. 004 16 9. 264	E 01.	**** 1. 7 L0. 7

2.44

2. 67

1314.46 1305

1331.24 1325

20 1. 184E 01

13 7.024E-01 12.7

/\* 18 DFC 1979 9:22:01 RM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8404. 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:40

ACQUISITION DATE: 17DEC79 2103:17 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 654. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

657. 10

665, 36

1.

1

10202.

621.

2615.

1814.

ELEMENT	PEAK ENERGY	BKGN	ID f	TREA	CONCE	ATR.	1 SIGMA ERROR	%EF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	511 0 564. 1 657. 1	968 432 261	:2. <i>2</i> 96	4530. 5034. 3202.	0. 019 1. 482 0. 298		0. 0007 0. 0035 0. 0057		3. 5 0. 2 1 9
• 1009: 542. 1018: 706. 1027: 648.	541. 849. 601.	554. 996. 559.	591. 1138. 545.	605. 1234. 460.	584. 1217. 503.	572. 1116. 515.	599. 931. 484.	650. 821. 470.	
1117:14918. 1126:27628. 1135: 591.		1.9228. 56956. 458.	15755. 56451. 469.	1.0610. 45955. 400.	5637. 28765. 401.	3229. 13071. 403.	4769. 4058. 399.	12088. 1077. 395.	
• 1301: 134. • 1310: 345. • 1319: 276.	168. 614. 170. ULSE-PIL	149. 1186. 159. E-UP CO	171. 1744. 137. PRRECTEI	1.62. 2070. 134. DATA	1.49. 2020. 136. CORREC <sup>*</sup>	177. 1594. 140. 110N =	167. 1073. 129. 1.000	204. 556. 1.60.	
PK IT ENER			KGND	FЫНМ	CHIMMEL			'SEC	ZERR
<ul> <li>1 1 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> <li>5 1 646.</li> </ul>	14 970 10 2960 76 82	68. 34. 73.	9684. 4851. 4322. 3281. 2799.	3. 07 2. 36 2. 38 2. 35 3. 12	1022. 47 1118. 61 1128. 52 1205. 78 1292. 39	1.014 1.107 1.107 1.198 1.285	18 7.556 35 1.616 35 4.934 17 1.379	9E 02 4E 02 9E 01	3. 4 0. 3 0. 2 1. 5
MA A			See a see see of see a	····· · · · · · · · · · · · · · · · ·		ا مره لينا منتو سند	J. 200	3E 00 1	L2. 2

2.44

2.31

1314.39 1306

1330.89 1324

18 1.700E 01

13 1.035E 00 1.0.5

\*\*\*\*\*\*\*\* 9:23:12 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \* \*\*\*\*\*\*\*

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DFC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9978, 999 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 17DEC79 2114:23 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 FLAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

-0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

1.

665.44

345.

1084.

ELEMENT	PERK ENERGY	BKGND	AREA	CONCENTR	1 SIGMA ERROR	XERROR
%-COPPER %-ANTIMONY %-ARSENIC		2235.	174909.	9. 8 <b>12</b> 5	0. 0005 0. 0023 0. 0034	3. 6 0. 3 2. 2
1018: 448.		292. 632. 278.		772.	313. 332. 668. 633. 280. 276.	370. 457. 304.
	26785. 3	L0408. 8 3416. 33 192.		1.7521 7	780. 2550. 850. 2358. 158. 179.	6635. 557. 180.
<ul><li>1310: 187.</li><li>1319: 125.</li></ul>	324. 75.				942. 600. 69. 81.	197. 344. 76.
PK IT ENER				CORRECTIO		'SEC %ERR
1 1 510. 2 2 559. 3 2 564. 4 1 602. 5 1 646.	<ul><li>5327</li><li>12 17498</li><li>76 483</li></ul>	74. 26 39. 22 30. 1.6	17. 3.22 63. 2.37 35. 2.37 28. 2.38 34. 2.40	1022.39 10 1118.64 11 1128.56 11 1205.79 11 1292.29 12	07 36 8.879 07 36 2.915 97 17 8.050	9E 01. 0.5 5E 02 0.2
6 1 657.			39. 2.46	1314.53 13		

2. 42

1331.05 1325

1.6 5.751E-01 1.4.5

9:24:22 AM \*\*\*\*\* 

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMF'LE IDENTIFICATION: TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9615, 999 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 17DEC79 2125:06 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 660. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

665. 42

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCE		1 SIGMA ERROR	ZEF	RROR
X-COPPER 2-ANTIMONY X-ARSENIC		10526. 4791. 3217.	5283. 326666. 11067.	1., 435	98 54 58			3. 1 0. 2 1. 9
• 1009: 604. 1018: 799. 1027: 726.	961.		523. 619. 247. 1379. 547. 550.	1379.	642. 1205. 634.	659. 1083. 574.	686. 900. 531.	
1117:16705. 1126:30726. 1135: 690.		53278. <i>6</i> 2:	311. 11502 221. 50303 472. 464	31.531.	3529. 1.4428. 449.	5217. 4391. 480.	13483. 1394. 468.	
• 1301: 191. • 1310: 363. 1319: 307.	703. 192.		984. 2397. 190. 165.	. 2277. 152.	219.	1104. 162.		
PK IT ENER				CHANNEL			'SEC	%ERR
<ul> <li>1 1. 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1. 602.</li> <li>5 1 645.</li> </ul>	13 10788 09 32666 77 90:	39. 53: 56. 47: L3. 41:	04. 2.41 91. 2.38 14. 2.39	1022, 46 1.118, 60 1128, 51 1205, 81 1292, 04	1107 1107 1198	1.8 8.805 34 1.798 34 5.444 17 1.502 14 1.126	E 02 E 02 E 01	3. 1 0. 3 0. 2 1. 5 11. 1
6 1 657.				1314. 35		18 1. 844		1. 2

2.30

1.331, 01, 1326

12 1.087E 00 10.8

2151..

652.

\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 9:25:34 FM 444444444444444444 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q202A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5536. 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TFB1

ACQUISITION DATE: 17DEC79 2136:21 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0. 5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

603.35

99.

70.

1.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 2 657. 4	1.61. 270. 96.	370. 1814. 0. <	0.0024 0.0139 0.0022	0. 0002 0. 0004 NOT DETE	7. 1. 2. 7 CTABLE
1009: 3. 1018: 24. 1027: 21.		47.	7. 8. 43. 55. 16. 5.	7. 54. 7.	7. 15. 50. 33. 7. 10.	15. 32. 5.
1117: 8. 1126: 146. 1135: 5.	5. 277. 11.	12. : 365. 38 4.	l.6. 1.0. 36. 302. 5. 10.		19. 24. 78. 27. 6. 3.	81. 12. 9.
1301: 6. 1310: 8. 1319: 7.	10. 5. 9. ULSE-PILE-	6. 8. 9. UP CORRE(	2. 6. 3. 8. 7. 6. CTED DATA.	6. 10.	1.0. 4. 7. 5. 7. 3. = 1.000	13. 8. 6.
PK IT ENER	GY AREA	ı BKGMI	Э БЫНМ	CHRINNEL LEF	T PW CTS/S	SEC ZERR
• 1 1 510. 2 1 564.				1022.37 101 1128.67 112		

3. 55

1206.97 1198 14 1.650E--01.15.6

## 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 02028

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6276.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

: 1:

ACQUISITION DATE: 17DEC79 2146:34 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 692. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 1.0.

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DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLFRANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:}

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER 0X-ANTIMONY X-ARSENIC	564. 2		2202.	0.0018 0.01.49 0.0019		8. 7 2. 3 CTABLE
<ul><li>1009: 9.</li><li>1018: 16.</li><li>1027: 17.</li></ul>	30.		52. 55.	56. 4	7. 14. 1. 41. 1. 12.	25. 32. 10.
1117: 5. 1126: 182. 1135: 5.	335.	431. 4	16. 13. 19. 394. 11. 8.	236. 10	4. 36. 9. 48. 5. 6.	84. 10. 6.
• 1301: 9. 1310: 9. 1319: 10.	Si.	2. 9. 10. UP CORRE	6. 7. 9. 9.	6. U.	6. 9. 6. 4. 5. 5. = 1.800	7. 6. 4.
PK IT ENER				CHANNEL LEFT		EC MERR
1 1 510. 2 1 564. 3 1 602.	19 2202	2. 18	0. 2.34	1022.37 1011 1128.70 1121 1204.68 1198	16 3.670E	

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 9:27:44 AM \*\*\*\*\*\*\*\* 

#### 91119065 RF LEAD-SECOND IRRADIATION

SAMPILE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10873.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TRB1

:4:

ACQUISITION DATE: 17DEC79 2156:49 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 601.. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* FIBUNDFINCE LIMIT: 85. 99%

ELEMENT	PEAK ENERGY	, BKGMD	AREF	CONCE		SIGMA RROR	%ERROR
X-COPPER ●X-ANTIMON X-ARSENIC		2 175.	3902		.52 e	). 0001 ). 0003 (OT DETE	7. 2 1. 7 CTABLE
1018:	12. 11. 44. 44. 25. 1.6.			21. 17. 00. 95. 7. 10.	88.	18. 54. 12.	21. 42. 11.
<b>_ 1126:</b> 3	19. 16. 16. 564. 14. 4.	750.		12. 16. 668. 417. 9. 5.	197.	55. 72. 8 <i>.</i>	153. 19. 10.
1301: 1310: 1319:	7. 10. 5. 7. 5. 6. PULSE-P:	9.	10. 7. 12. RECTED DE	9. 9. 10. 15. 7. 5. TB. CORRE	9. 4.	8. 8. 8. 900	10. 8. 9.
PK IT E			GND FWH		LEFT PW	CTS/S	EC %ERR
2 1. 5		3902.	320. 2.6 175. 2.3 190. 2.5	6 1128.70	9 1121 20		00 1 7

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 9:28:54 AM \*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0203A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11501.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE MAME: EFF. TAB1.

ACQUISITION DATE: 17DEC79 2207:03 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 695. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHML: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGNE	) i	REH	CONCE		SIGMA ERROR 	%EF	ROR
%-COPPER ●%-ANTIMONY %-ARSENIC	510.8 7 564.1 657.4	293	9. 3:	734. 3648. 0. <	0. 00: 0. 1.24 0. 00:	45	0. 0002 0. 0007 NOT DETI	ECTABL	7.8 9.6 E
1018: 7	86. 42. 77. 106. 71. 50.	39. 140. 49.	53. 142. 42.	57. 174. 41.	1.6.1	61. 122. 37.	57. 106. 41.	56. 93. 47.	
<b>1126: 29</b> 0	L8. 125. 15. 5032. 23. 20.	127. 6403. 10.	129. 6530. 30.	108. 5399. 17.		202. 1606. 11.	428. 482. 20.	1164. 74. 24.	
1301: 1310: 1319:	8. 5. 5. 9. 8. 5. PULSEPI	9. 9. 11. LE-UP COF	8. 8. 9. RECTEI	8. 12. 11. D DATA.	14. 7.	11. 14. 13. TION =	13. 14. 10. 1. 000	14. 4. 10.	
PK IT E	ÆRGY A	REA BI	(GND	FЫНМ	CHFINNEL		CTS/	SEC .	%ERR
2 4 55	59. 45 54. 15 - 33		L274. 487. 299. 394.	3. Ø1 3. 21 2. 36 2. 26	1022. 09 1119. 24 1128. 62 1206. 00	1110 3 1110 3	6 1. 223 3 1. 066 3 5. 608 5 1. 652	E 00 E 01	7. 8 6. 3 9. 5 4. 3

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0203B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11191.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

ACQUISITION DATE: 17DEC79 2217:21 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 606. SEC \* SHAPE PRAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

24

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DETECTOR: GEL1-8 \* LIBRARY: NUCL. L.181.

▶DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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ELEMENT	PERI ENERI		JD f	AREA	CONCE		1 SIGMA ERROR	ZER!	ROR
%-COPPER %-ANTIMON %-ARSENIO	<b>4</b> 4 564.			4956.	0. 133	32		1	0. 6
	44. 5. 87. 10. 69. 5	3. 117.		163.	57. 151. 48.		109.	53. 94. 34.	
1117: 1126: 29 1135:	96. 12 986. 524 19. 1	3. <i>66</i> 91.		142. 5760. 18.	1.35. 3667. 12.	203. 1654. 20.		1224. 94. 16.	
• 1310: 1319:	11.	3. 15.	21. 10.	13. 6.	17. 7.	12. 22. 12. IION =	1.8. 12.	8. 15. 7.	
PK IT E	EMERGY		SKGND		CHANNEL			SEC	%ERR
2 1. 5		34956.	945. 1404. 236.		1022. 28 1128. 65 1205. 89	1120	21 1.346 18 5.826 16 1.718	E 01	6. 4 Ø. 6 3. 8

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 0203C

TYPE OF SEMPLE: UNKNOWN

SAMPLE QUANTITY: 12103.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TRB1

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ACQUISITION DATE: 17DEC79 2227:40 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
PLAPSED REAL TIME: 605. SEC \* SHAPF PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

plane days given your pages your pages. And your a see that

DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGMD	***************************************	AREA	CONCE		1 SIGMA ERROR	%ER	ROR
X-COPPER  X-ANTIMONY X-ARSENIC	564. 2	1510	. 3	4383.	Ø. 123	14	0. 0007		
• 1009: 49. 1018: 71. 1027: 76.	84.	100.	140.	161.	155.	1.45.		104.	
1117: 98 1126: 2928 1135: 27	51.41.		6783.	5592.		1625.		91	
● 1301: 1.4 1310: 4 1319: 11	13. 10.	9.	1.9. 1.0.	11.	20. 9.	19. 13.	13.	9. 7. 11.	
PK IT ENE	PULSE-PILE RGY ARE		GND				1.000 W CTS/	SEC	ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li><li>3 1 602.</li></ul>		33. 1	941. 510. 192.	2. 34	1.022.85 1128.65 1205.85	1120	19 1.178 20 5.730 16 1 702	E 01	7. 2 0. 6 7 7

\*\*\*\*\*\*\* 18 DEC 1979 9:32:06 FM \*\*\*\*\*\*\*\*\* 

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8918, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 17DEC79 2237:58 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

ELEMENT		PEAK JERGY 	BKGND	***************************************	AKEA	CONCE		1 SIGMA ERROR	ZERI	ROR
X-COPPER •X-ANTIMO X-ARSENI	NY S		616. 294. 109.		9200. 466. 0. <		22	0. 0005 0. 0002 NOT DETE		1. 2 7. 0 F
1018:			28.	40. 1.251. 67.	39. 1353. 29.	54. 1385. 24.	88. 1164. 17.	1.10. 923. 1.1.	196. 600. 12.	io
	42.		94.	8. 99. 9.	12. 96. 9.	13. 64. 6.	16. 28. 14.		25. 9. 9.	
1301: 1310: 1319:	4.	9.	7.	10. 8. 9. RECTE	5. 10. 5. D DATTA.	7.	10. 13. 11. Clon =	10. 11. 8. 1. 000	7. 8. 8.	
PK IT  1 1	ENERGY 511. 03 564. 29	AREA 9200 466	. !	GND 616. 294	3. 15	CHRINNEL 1022. 47	1011	W CTS/9 28 1.5338	: 01 :	%ERR 1. 1

28 7.768E-01 1128.91 1120

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 9:33:08 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\* 64444444444444

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9279, 000 UNITS: UG

-0.5932283 KEV

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TRB1

\*

ACQUISITION DATE: 17DEC79 2248:12 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 1. 759KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET:

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREH	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 1 564. 3 657. 4	416. 1.84. 135.	7854. 330. 0. с	0. 0329 0. 0015 0. 0016	0. 0004 0. 0001 NOT DETE	1. 3 8. 0 CCTABLE
• 1009: 23. 1010: 293. 1027: 266.	25. 511., 7 149.	21. 22. '45. 941. 92. 35.	40. 1.105. 31.	39. 69 1127. 983 23. 13	826.	171. 544. 3.
1117: 5. 1126: 30. 1135: 12.	6. 36. 13.	12. 11. 85. 71. 8. 14.	9. 75. 8.	36. 26	3. <b>1.</b> 5. 5. 7. 5. 5.	18. 9. 8.
• 1301: 9. • 1310: 13. 1319: 8.	6. 9. 11. 'ULSE-PILE-L	8. 11. 8. 8. 8. 11. JP CORRECTE		18. 15	<sup>7</sup> . 5.	6. 9. 8.
PK IT ENER	GY AREA	BKGND	FWHM	CHANNEL LEFT	PW CTS/S	SEC ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li></ul>		41.6. 1.84.		1022.63 1011 1128.85 1121	26 1.309E 23 5.496E	

\*\*\*\*\* 18 DEC 1979 9:34:10 AM \*\*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*

91119065 RF LEAD-SECOND JRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION:

TYPE -OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11976, 00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TADA

ACQUISITION DATE: 17DEC79 2258:26 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER •X-ANTIMONY X-ARSENIC	511. Ø 564. 1 657. 4	438. 162. 93.	9887. 428. Ø. <	0. 0324 9. 9915 9. 9919	0. 0004 0. 0001 NOT DETE	1. 2 6. 4 CTABLE
• 1009: 25. 1018: 390. 1027: 392.	21 638. 221.	976. 133	10. 34. 32. 1.471. 36. 18.		. 954.	217. 631. 16.
1117: 6. 1126: 50. 1135: 8.	2. 76. 12.	11. 87. 7 9.	8. 10. 75. 80. 7. 10.	3. 10 48. 26 4. 8	. 1.0.	22. 10. 5.
• 1301: 9. 1310: 9. 1319: 7.	8. 5. 7. ULSE-PILE-	8. 5. 4. UP CORREC	6. 8. 5. 8. 5. 9. CTED DATA.	9. 7 6. 9	. 10. . 8.	9. 8. 4.
PK IT ENER		H BKGNE	) РЫНМ	CHANNEL LEFT		SEC MERR
<ul><li>1 1 511.</li><li>2 1 564.</li></ul>				1.022. 49 1011 1128. 49 1117	24 1. 6486 19 7. 1366	

\*\*\*\* 18 DEC 1979 9:35:16 AM \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q205R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9347, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 17DEC79 2308:41 \* FWHM(1332) 2.399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 695. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

1. 750KV \* HALF LIFE RATIO: 8. 99

KEY/CHNL: 0.5003803

OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

645, 85

75.

230.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR		SIGMA ROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	1345.	740. 29993. 0. <		Ø.	0002 0009 OT DETEC	
	87.	40. 3: 91. 12: 52. 4:	ð. 143.		42. 134. 45.	1.06.	
1117: 112 1126: 2588, 1135: 18.		115. 13; 875. 583! 15. 1	5. 4924.	3180. 1	176. L359. 14.	423.	081. 83. 1.1.
1319: 12.	11.	17. 1! 9. (	5. 13. 5. 13.	10.	18. 7.	13. 9.	7. 12. 12.
PK IT ENER			FWHM	CHANNEL LE		CTS/SE	C XERR
1 1. 511. 2 1 564. 3 1 602.	1.5 29993	. 1345.	2. 33	1022, 53 10 1128, 64 11 1205, 96 11	.20 20		00 6.4 01. 0.6 00 4.4

2.47

1291. 91 1284

18 1.256E-01 30.7

# 91119065 RF LEAD-SECOND IRRADIATION

| SAMPLE DATE: 17DEC79 1017:00 | SAMPLE IDENTIFICATION: Q205B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8898.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABA

:4:

ACQUISITION DATE: 17DEC79 2319:00 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4. 000 ELAPSED REAL TIME: 695. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 10.

-4

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

ELEMENT		BKGND		CONCEN		1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	<i>1</i> .373. 3	3781.		37	0.0010	0.6
● 1009: 48. 1018: 77. 1027: 65.	91. 1	42. 44. 11. 119. 50. 49.	143.	155.	141.	49. 129. 36.	86.
1117: 116. 1126: 2800. 1135: 24.	51.00. 65	32. 136. 52. 6677. 16. 21.		3606.		471.	1.093. 1.06. 1.4.
	15. 11. 9. ULSE-PILE-L	19. 19. 8. 12.	14. 12.	19. 11.	1.7. 9.	19. 7.	12. 12. 10.
PK IT ENER		EKGND			LEFT P	W CTS/	SEC ZERR
1 1 511. 2 1 564. 3 1 602.			2. 31	1022. 92 1128. 66 1205. 90	1120 :	19 1. 1360 18 5. 6300 18 1. 6860	E 01 0.6

\*\*\*\*\*\* 18 DEC 1979 9:37:27 AM \*\*\*\*\*\*\* \*\*\*\*\*\*\*\* \*\*\*\* \*\*\*\*\*

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: Q205C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9437, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 17DEC79 2329:18 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

1.. 750KV \* HALF LIFE RATIO: 8.00

KEY/CHNL: 0.5003803 OFFSET:

\* ABUNDANCE LIMIT: 85. 00%

-0.5932283 KEV

\*

# UNKNOWN SAMPLE REPORT

645.43

124.

150.

ELEMENT	***************************************	PEAK ENERGY	BKGN	D	AREA	CONCE		1 SIGMA ERROR	<b>ZE</b> F	ROR
X-COPPEI X-ANTIM X-ARSEN:	DM'+'		90 22 1.5	:6. 3:	709. 1786. 0. <	0. 14:		0. 0002 0. 0008 NOT DET		7. 1. 0. 6 .E
	60. 59. 76.		39. 112. 42.	101	37. 136. 49.	153.	44. 134. 41.			
1117: 1126: ; 1135:	85. 2711. 24.	128. 4748. 22.	116. 6002. 17.	131. 6141. 1.4.	125. 5022. 16.	3325.	4.537.	432.	1101. 71. 18.	
1301: 1310: 1319:	11.			17. 9.	3. 10. 10. D DATA.	14. 8.	13. 15. 9. TION =	1.2. 11.	8. 6. 7.	
PK IT	ENERG			KGND	FWHM	CHANNEL.			SEC	ZERR
1 1 2 6 3 6 4 1	511. 2 559. 3 564. 1 602. 7	8 47 5 3178	71. 36.	908. 209. 226. 630.	3. 19 1. 54 2. 37 2. 47	1022, 95 1119, 09 1128, 63 1205, 75	1109 1109	22 1. 181 29 7. 846 29 5. 298 35 1. 519	E-01 E 01	7. 1. 6. 3 9. 6 5. 1

2. 79

1291.07 1283

15 2.068E-01.16.6

91119065 RF LEAD-SECOND 1RRADIATION

SAMPLE DATE: 17DFC79 1017:00
SAMPLE IDENTIFICATION: 5626A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10957.00 UNITS: UG

1.96.

907.

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

ACQUISITION DATE: 17DEC79 2339:36 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

+:

UNKNOWN SAMPLE REPORT

1.

657.47

ELEMENT	PEAK ENERGY B	KGND	AREA	CONCE		1 SIGMA ERROR	XERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1.	1.572. 18	:0863. :2693. 1.96.	0. 721	.4	0. 0020	1. 0 0. 3 22. 9
1009: 286. 1018: 1097. 1027: 945.	1619. 231	4. 300. 0. 2878. 3. 334.	3506.	3392.	2934.	471. 2276. 226.	1.488.
1117: 523. 1126:15733. 1135: 185.		1. 642. 1. 35676. 7. 126.	28900.	18620.	8528.		
9 1310: 37. 1319: 62.	64. 3		55. 40.	76. 48.	67. 41.	58. 43.	34.
PK IT ENER	:GY AREA	BKGND	FWHM	CHANNEL	LEFT F	W CTS/	SEC ZERR
1 1 511. 2 5 559. 3 5 564. 4 1 602. 5 1 645.	70 2190. 14 182693. 79 5332.	5767. 1257. 1572. 1570. 542.	3. 06 1. 72 2. 34 2. 42 2. 15	1022. 47 1119. 72 1128. 60 1205. 86 1291. 90	1.109 11.09 1194	23 3.477 37 3.650 37 3.045 23 8.886 11 5.182	E 00 3.1 E 02 0.2 E 00 1.7

4. 34

1315.14 1306 19 3.264E-01 22.9

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S626B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10664.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**-**}:

ACQUISITION DATE: 17DEC79 2350:14 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GEL1-8

: GEL1-8 \* LIBRARY:NUCL.[]81

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

1.

656, 95

118.

ELEMENT	PERK ENERGY	BKGND	AREA	CONCEN		1 SIGMA ERROR	%ERROR
%-COPPER •%-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 0		19748. 77048. 118. <	0. 076 0. 719 0. 003	7	0. 0008 0. 0020 NOT DET	1. 0 0. 3 ECTABLE
• 1009: 260. 1018: 1044. 1027: 898.	293. 1473.	298. 268. 2226. 2770. 364. 291.	3146.	289. 3150. 220.	323. 2740. 226.	438. 2217. 208.	617. 1.422. 191.
1117: 486. 1126:15454. 1135: 200.	564. 26619. 3: 123.	559. 587. 3944. 34360. 1.24. 131.	. 281.75.	684. 18054. 106.	973. 8089. 1.03.	2255. 2409. 98.	6222. 513. 97.
1301: 46. 1310: 45. 1319: 42.	37. 46. 40. ULSE: PILE-	46. 53. 51. 67. 38. 37. -UP CORRECTI	. 77. . 45.	42. 68. 39. CORRECT	40. 57. 38. ION =	49. 33.	29. 46. 32.
PK IT ENER	GY AREI	R BKGND	FWHM	CHANNEIL	LEFT P	W CTS/	SEC %ERR
1 1 511. 2 7 559. 3 7 564. 4 1 602.	63 206: 14 17704:	5. 972. 3. 1441	1. 37 2. 35	1119. 60 1128. 60	1109 1109	23 3.291 30 3.442 30 2.951	E 00 3.1 E 02 0.2
5 1 645.			2. 42 2. 99			19 8.576 17 6.334	

2.13

1314.10 1305

19 1. 974E-01 37. 0

903.

\*\*\*\* 18 DEC 1979 9:41:04 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: 56260

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8908.000 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABI

ACQUISITION DATE: 18DEC79 0:53 \* FWHM(1332)2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000 ELAPSED REAL TIME: 621. SHEC: \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* NER ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIN: 85. 00%

1. 750KV

1292.50 1284 15 4.673E-01 13.9

## UNKNOWN SAMPLE REPORT

5

1.

646.15

280.

623.

ELEMENT	PEAK ENERGY	BKGND	AREA	COMCEN		SIGMA ERROR	%ERROR
%-COPPER •X-ANTIMONY X-ARSENIC	564. 1	1231 14	7418.	0. 718	7	0. 0021	Ø. 3
• 1009: 232. 1018: 892. 1027: 819.	1270. 1:	179. 221. 390. 2438. 326. 237.	2841.	2685.	2469.	1819.	1.317.
1117: 424. 1126:12577. 1135: 113.	24.995. 28:	494. 519. 172. 28675. 95. 88.		592. 15232. 75.		1704. 2014. 72.	452.
• 1301: 43. 1310: 29. 1319: 36.	42. 36.	46. 45. 31. 21.	58. 24.	57. 46.	40. 26.	53. 28.	
PK IT ENER		JP CORRECTE BKGND		CORRECT CHANNEL			EC XERR
2 1.0 559. 3 1.0 564.	15 147418 81 4320	840. 1231.	3. 12 1. 35 2. 35 2. 35	1022. 49 1119. 68 1128. 63 1205. 89	1108 3 1108 3	23 2.900E 88 3.189E 88 2.457E 20 7.200E	00 3.1 02 0.3

2. 64

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S604A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8652.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TADA.

:4:

ACQUISITION DATE: 18DEC79 11:27 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 4.000 FLAPSED REAL TIME: 650. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.750KY KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

1

657.11

3158.

1876.

ELEMENT	PERIK ENERGY	BKGNI	) <u> </u>	7REA	C:ONCEN		1 SIGMA ERROR	725 	ROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 1 657. 1	71.91 383( 187)	8. 360	1267. 5148. 31.58.		51 L4 75	0. 0006 0. 0040 0. 0029		9, 9 0, 2 3, 0
• 1009: 584. 1018: 544. 1027: 505.	502. 587. 494.	477. 633. 514.	523. 701. 481.	514. 712. 477.	519. 679. 472.	537. 629. 486.	523. 620. 456.	509. 603. 429.	,
1117: 5111. 1126:32444. 1135: 553.	6375. 55836. 466.		5603. 70212. 407.	4194. 57634. 378.	2807. 36707. 328.	2569. 1.6610. 349.	4932. 5157. 336.	13698. 1318. 314.	
• 1301: 114. • 1310: 172. • 1319: 157.	132. 260. 116. ULSE-PILI	133. 447. 126. E-UP COI	130. 598. 106. RRECTEI	124. 732. 121. D DATA.	1.27. 708. 109. CORRECT	115. 577. 115. Clow =	1.26.	144. 240. 114.	
PK IT ENER	:GY AR	EA BI	KGND	FWHM	CHANNEL	LEFT F	'W CTS	/SEC	ZERR
<ul> <li>1 1 510.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> </ul>	18 322 12 3661 77 1.05	67. 48. : 44. :	7193. 4398. 3838. 3145.	3. 24 2. 38 2. 37 2. 35	1022. 37 1118. 70 1128. 57 1205. 81	1108 11.08 1196	14 2. 112 34 5. 370 34 6. 102 19 1. 75	3E. 01 2E. 02 7E. 01	9. 9 0. 6 0. 2 1. 2
5 1 645.		02. :	1557.	2. 87	1291. 92	1586	13 1. 337	7E 00	7.8

2.39

1314.40 1307

16 5.264E 00

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 18 DEC 1979 9:43:22 FM 44444444444444444444 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S604B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9725, 000 UNITS: UG

SAMPILE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 22:29 \* FWHM(4.332)2.390 PRESET TIME (LIVE): 600. SE.C \* SENSITIVITY: 4. 999 ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

3570.

657.15

2328.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

ELEMENT.	PEAK ENERGY	BKGND	FIREA -	CONCE		1 SIGMA ERROR	%ERROR	
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1.		.9937.	0. 008 1. 882 0. 098	26		Ø. 2	
	716. 7	502. 551. 781. 772. 540. 522.	856.	785.	749.	574. 716. 523.	661.	
1117: 5668.		280. 6368. L62. 80634. 584. 555.	65086.	42183.	2978. 19110. 421.	6187.	16224. 1712. 401.	
• 1310: 186. 1319: 189.	301. ·	152. 171. 194. 678. 131. 135. JP CORRECTE	823. 1.43.	816. 132.	686. 156.	478. 124.	289.	
PK IT ENER		BKGND	F WHM			W C:TS/	'SEC ZERI	R
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 573.</li> <li>5 1 602.</li> <li>6 1 645.</li> </ul>	1.8 35355. 1.2 419937. 40 148. 77 12327.	4311. 3812.	3, 53 2, 36 2, 38 4, 83 2, 37 2, 78	1022, 08 1118, 70 1128, 56 1147, 11 1205, 81 1291, 93	1107 1107 1141 1198	14 3. 293 35 5. 893 35 6. 993 12 2. 461 17 2. 055 15 1. 324	2E 01 0.6 3E 02 0.2 .E-01 63.4 3E 01 1.1	

2. 41.

1314.49 1307

4.6 5.950E 00

# 91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00 SAMPLE IDENTIFICATION: S604C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9177.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABI

4:

:1:

ACQUISITION DATE: 18DFC79 33:40 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 699. \* SENSITIVITY: SEC 4.000 ELAPSED REAL TIME: 655. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

and only love how only a continue to the continue of the conti

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCF LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

1.

657. 13

3531.

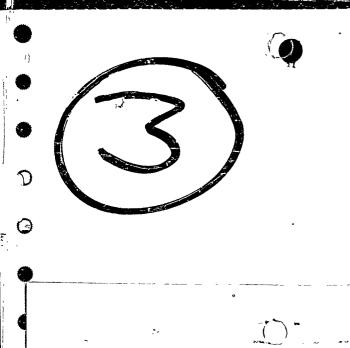
1811.

ELEMENT	PEAK ENERGY	BKGND	F	REA	CONCEN		1 SIGMFI ERROR	7EF	?ROR 
X-COPPER X-ANTIMONY X-ARSENIC	511. 1 564. 1. 657. 1.	8740. 4313. 1811.	399	.480. 9413. :531.	0. 006 1. 901 0. 103		0. 0006 0. 0041 0. 0029		9. 3 9. 2 2. 8
• 1009: 561. 1018: 570. 1027: 561.	585. 611. 586.	603. 704. 527.	540. 767. 548.	582. 739. 500.	528. 773. 529.	572. 757. 489.	584. 684. 515.	629. 638. 490.	
1117: 5406. 1126:35529. 1135: 668.			6079. 6099. 463.	4498. 62579. 442.	2972. 40394. 397.	2827. 1.8456. 417.	5467. 5699. 400.	15057. 1501. 373.	
• 1301: 145. • 1310: 176. 1319: 155.	139. 260. 128. ULSE-PILE	116. 439. 112. G-UP-COR	135. 708. 125. RECTEI	1.40. 783. 121. DATA.	1.1.8. 776. 123. CORRECT	128. 665. 132. (ION =	132. 441. 129. 1. 000	124. 257. 112.	
PK IT ENER	GY ARE	A BK	GND	FWHM	CHANNEL	LEFT F	W CTS.	/SEC	%ERR
<ul> <li>1 1 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	1.8 3404 1.2 39941	14. 4 13. 4	740. 833. 313. 253.	2. 37 2. 38	1022, 56 1118, 70 1128, 58 1205, 83	1107 1107	16 2. 467 34 5. 674 34 6. 657 21 1. 932	‡E 01 7E 02	9. 3 0. 6 0. 2 1. 2
5 1. 646.		j6. 2	Ø62.	2. 26	1292. 28	1285	14 1.176	5E 00	9. 8

2.37

1314.45 1307

15 5.885E 00



3 rd Irradiation 12 118/79

Lapa quiques son

91119065 RF	LEAD-THIRD IRE	ADIRTION	3	12 110 179.
SAMPLE	SAM. AT. 🧥	N-COPPER	Z-AN ONY	%-ARSENIC
●02068 02068 02068	11852. 000 11527. 000 13738. 000	9. 99229 9. 99229 9. 99295	0.03073	0. 00126 0. 00124 0. 00117
•		0.00215 AVG 0.000086 SD 3.982831 XRSD	0. 03132 AVG 0. 000529 SD 1. 687976 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 0207A 0207B 0207C	11259. 000 8787. 000 9351. 000	0. 00224 0. 00252 0. 00221	0. 11118	0. 00155 0. 00174 0. 00164
		0.00233 FIVG 0.000171 SD 7.345883 %RSD	0.10997 AVG 0.002658 SD 2.417009 %RSD	0. 00000 AVG 0. 000000 SD 0. 000000 %RSD 🌗
0208FI 0208B 0208C	9073. 000 10127. 000 8632. 000	0. 00210 0. 00256 0. 00214	0. 10785	0. 00153 0. 00141 0. 00170
		0.00227 AVG 0.000255 SD 11.241609 XRSD	0.10960 AVG 0.003211 SD 2.929610 %RSD	0. 00000 RVG 0. 000000 SD 0. 000000 XRSD •
© 0209A 0209B 0209C	11542. 000 11403. 000 9651. 000	0. 00202 0. 00224 0. 00230	0. 02990	0.00104 0.00106 0.00116
		0.00219 AVG 0.000148 SD 6.742258 %RSD	0.03122 AVG 0.001184 SD 3.793168 %RSD	0. 00000 FIVG 0. 000000 SD 0. 000000 %RSD
<b>0</b> 0210	7485. 000	0. 00356 <sup>°</sup>	0. 78247	0. 15272 <b>•</b>
0211.	10875.000	0. 00469	0. 80023	0. 17301
0212	8525. 000	0. 00468	<b>8. 7828</b> 9	Ø. 16349
•0213	8987. 000 <sup>*</sup>	0. 00358	√0. 75425	0. <u>15</u> 583
• <sup>0214</sup>	9092. 000	0. 00226	0. 71166	0. 12493 <b>•</b>
0215A 0215B • 0215C	11810.000 9062.000 9175.000 Š	0. 08273 0. 08319 0. 08569	0.60700 < 0.59978 < 0.62120 <	0. 00266 0. 00283 0. 00298
•		0.08387 AVG 0.001593 SD 1.899543 WRSD	0.60933 AVG 0.010901 SD 1.788968 %RSD	
0216A 0216B ● 0216C	1.01.07. 000 8743. 000 8482. 000	0. 07985 0. 07973 0. 07686	0. 55559	0. 00253 0. 00266 0. 00273
•		0.07881 NVG 0.001.693 SD 2.147540 ZRSD	0.54500 AVG 0.01461.4 SD 2.681482 28SD	0.00000 AVG 0.000000 SD 0.000000 YPSN

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	man and the man that and man	for the formal surface out of a six same for
● 0217A 0217B ● 0217C	9827. 000 <b>()</b> 9596. 000 10423. 000	0. 05576 0. 05484 0. 05411	0. 71 <b>. )</b>	● 0. 00288 0. 00276 0. 00276
• - `		0.05491. NYG 0.000828 SD 1.508112 %RSD	0. 70570 AVG 0. 015255 SD 2. 1.61.627 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
Q218A Q218B ● Q218C	9990. 000 8442. 000 9473. 000	0. 00256 0. 00284 0. 00248	0.13030	0. 00161 0. 00164 0. 00160
•		0.00263 NYG 0.000191 SD 7.288915 %RSD	0.1.2605 NYG 0.004305 SD 3.415428 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
Q228A Q228B Q228C	9410. 000 9208. 000 8913. 000	0. 00238 0. 00217 0. 00222	0. 03134	0. 00107 0. 00135 0. 00144
•		0.00226 AVG 0.000112 SD 4.936715 %RSD	0.03088 RVG 0.000436 SD 1.413453 XRSD	0.00000 AYG 0.000000 SD 0.000000 XRSD
Q229A Q229D ● Q229C	5291. 000 4507. 000 8475. 000	° 0. 00334 0. 00333 0. 00288	0. 12788	0.00270 0.00337 0.00187
•		0.00319 AVG 0.000263 SD 8.244488 XRSD	0.12757 AVG 0.001507 SD 1.181537 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
0230A 0230B ●0230C	1.0140. 000 7129. 000 3512. 000	0. 00254 0. 00200 0. 00262	0. 1.1326	0.00153 0.00192 0.00342
•		0.00239 RVG 0.000340 SD 14.240730 XRSD	0.10998 fiVG 0.002980 SD 2.709568 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
0231A 0231B ●0231C	8593. 000 1.0892. 000 7681. 000	0. 00293 0. 00280 0. 00264	0.13508	0.00164 0.00146 0.00186
•		0.00279 AVG 0.000144 SD 5.161575 XRSD	0.13062 FIVG 0.003900 SD 2.985747 %RSD	0. 00000 AYG 0. 000000 SD 0. 000000 XRSD
Q232A Q232B ●Q232C	8435. 000 9165. 000 9432. 000	0. 00206 0. 001.64 0. 00178	0. 02955	0.00124 0.00114 0.00117
•		0.00183 AVG 0.000215 SD 11.783684 %RSD	0.02975 AVG 0.000925 SD 3.109001 XRSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
Q233A	12320.000	0. 00226	<u>0 02908 (</u>	_ 0_00092

●0233B	6626. 000	0. 00253	ø.	0. 00155
●0233C	9634. 000	0. 00220		0. 00118
• • • • • • • • • • • • • • • • • • • •	``,	0.00233 AVG 0.000179 SD 7.673418 %RSD	0. 02965 AVG 0. 000497 SD 1. 677328 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
0234A	8570. 000	0. 00231	0.10428	0.00167
0234B	5308. 000	0. 00216		0.00235
0234C	3665. 000	0. 00253		0.00321
•		0.00234 AVG 0.000185 SD 7.904153 %RSD	0.10526 AVG 0.002145 SD 2.038127 XRSD	0. 00000 AVG 0. 000000 SD 0. 000000 XRSD
0235A	8812. 000	0. 00269	0.11793	0. 00175
0235B	5545. 000	0. 00229		0. 00233
<b>0</b> 0235C	6203. 000	0. 00293		0. 00222
•		0.00264 AVG 0.000322 SD 12.225515 %RSD	0.11648 AVG 0.001620 SD 1.390989 %RSD	0.00000 RVG 0.000000 SD 0.000000 XRSD
Q236A	1.1815. 000	0. 00253	0.12000	0. 00144
Q236B	9961. 000	0. 00249		0. 00151
● Q236C	5924. 000	0. 00206		0. 00226
•		0.00236 RVG 0.000262 SD 11.125896 %RSD	0.11699 AVG 0.002659 SD 2.272750 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
Q239A	8751. 000	0. 07997	0.58695	0. 0031.8
Q239B	8429. 000	0. 07634		0. 00325
●Q239C	8501. 000	0. 08218		0. 00339
•		0.07949 RVG 0.002948 SD 3.708819 %RSD	0.58449 AVG 0.006185 SD 1.058180 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
0240A	9207. 000	0. 00141	0. 04973	0. 00142
0240B	1.0669. 000	0. 00150		0. 00123
0240C	10333. 000	0. 00141		0. 00130
•		0.00144 AVG 0.000054 SD 3.718303 %RSD	0.05012 AYG 0.000641 SD 1.278106 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
S626A	9497. 000	0. 07753	0.71610	0. 00351
S626B	9747. 000	0. 07549		0. 00349
● S626C	10186. 000	0. 081.11		0. 00581
•		0. 07804 RVG 0. 002843 SD 3. 642533 XRSD	0.71989 AVG 0.009469 SD 1.315351 XRSD	0.00581 AVG 0.000000 SD 0.000000 XRSD
S604A	8210. 000	0.00710	1. 80429	0. 10502
S604B	9534. 000	0.00973	1. 80233	0. 09796
●S604C	9555. 000	0.00692	1. 72033	0. 09722

0. 10007 AYG 0.00792 AVG 1. 77565 AVG 0. 047615 SD 2. 69 48 %RSD 0.001573 SD 0.004303 SD ช. 001573 SD 19. 874302 %RSD 4.300308 %RSD (TI)TITLE:

91119065 RF LEAD-THIRD IRRADIATION

CLNOLIBRARY:

(SA)SAMPLE TÍME: 18DEC79 1020:00 (SE)STD ENERGY TOLERANCE: (UE)UNK ENERGY TOLERANCE: (TF)THERMAL FLUX: 0.0000E-01

(EF)EPITHERMAL FLUX: 0.0000E-01. ▶(FF)FAST FLUX: 0.0000E-01

(QU)UNITS: UG

ELEMENT EMERGY HALF-LIFE SEC:

51.1.00 1.2800E 01 H 4.6080E 04 X-COPPER

X-ANTIMONY 564.09 2.7200E 00 D 2.3501E 05 X-ARSENIC 657.41 2.6300E 01 H 9.4680E 04

# STANDARD SAMPLES

	MAME:	MASS	FILE:	POWER	ACT TIME
 1	S626A	9497. 00	FBI1 . A01	199. 9	100000.0
2	96268	9747. 00	FBI1 . 802	1.00. 0	1,00000.0
3	S626C	1.01.86. 00	FEIJ . RØ3	100. 0	100000.0
 4	S604A	821.0. 00	FBI1 . A04	1.00. 0	100000.0
S	S604B	9534. 00	FB14 . A05	100.0	100000.0
6	S604C	9555. 00	FBI1 A06	1.00. 0	100000.0

#### STD: 1. S626A FILE= FBI1. . A01.

•		ELEMENT	ENERGY	C:CIMC	ERROR
	1	%~C:OPPER	511.00	7. 8000E-02	0. 0000E-01
_	2	YMOMITMA~X	564. 09	7. 2000E-01	0. 0000F-01.
•	3	X ARSENIC	657. 41	0.0000E01.	0. 0000E:- 01.

#### STD: 2 56268 FILE= FBI1 . A02

-		L.LEI'IE M I	ELIMELIKLIT	CUNL:	ERRUR
•	1	%COPPER	511 00	7. 8000E-02	0. 0000E-01.
	2	Y-ANTIMONY	564. 09	7. 2000E01.	0. 0000E-01
	3	X-ARSENIC	657. 41	0. 0000E-01	0. 0000E01

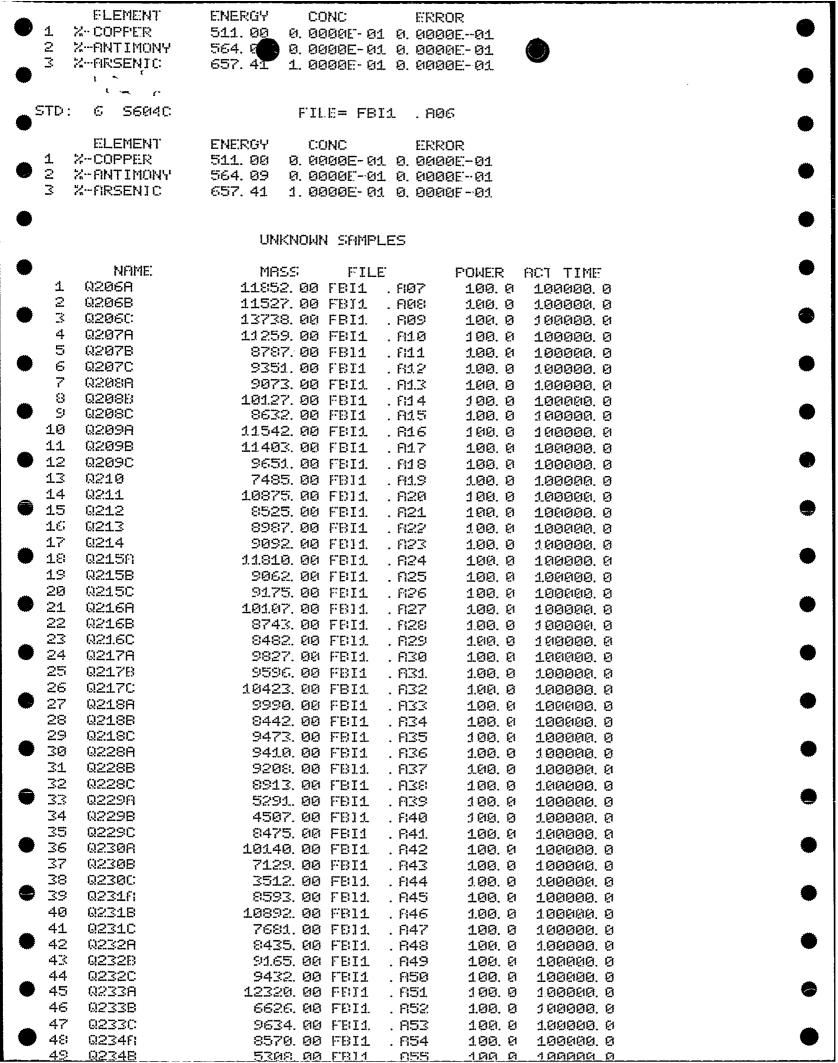
#### STD: 3 56260 FILE= FBI1 . A03

		ELEMENT	energy		CONC:		ERROR
		X-COPPER	511.00	7.	8000E-02	Ø.	0000E-01.
8	2	X-FINT IMONY	564. 09	7.	2000E01	Ø.	0000E-01.
	3	%FIRSENIC:	657, 41,	Ø.	0000E-01.	Ø.	000000-01

#### STD: 4 5604A FILE= FBI1. . A04

		ELEMENT	ENERGY	CONC	E.RROK
	1	X-COPPER	511.00	0.0000E-01	. 0. 0000E-01
_		YMOMITMA%	564. 09	0. 0000E01	. 0. 0000E-01
•	3	X-ARSENIC	657. 41	1. 0000E-01	0. 0000E-01

STD: 5 S604B FILE= FDI1 . R05



50	Q234C	3665.00 FBI1	. A56	100. 0	100000. ต
<b>5</b> 1.	Q235A	8812.00 FBI1	. A57	100.0	100000.0
52	Q235B	5 5.00 FEI1	. A58	100.0	<b>1</b> 00000.0
_ 53	Q235C	6203.00·FBI1	. R59	100.0	199999.9
<b>5</b> 4	Q236A '	11815.00 FBI1	. FISØ	100. O	1.00000.0
55	0236 <b>B</b> (	9961.00 FBI1	. R61	100.0	100000.0
_ 56	Q236C	5924.00 FBI1	. A62	100.0	100000.0
<b>5</b> 7	Q239A	8751.00 FB11	. A63	100.0	1.00000.0
58	Q239B	8429.00 FB11	. R64	100.0	1.00000.0
59	0239C	8501.00 FBI1	. A65	100.0	1.00000.0
<b>9</b> 60	Q240A	9207.00 FBI1	. A66	100. 0	199999.9
61	Q240B	10669.00 FBI1	. ค67	100. 0	100000.0
_ 62	Q240C	10333.00 FBI1	. A68	100.0	100000.0
<b>9</b> 63	5626A	9497.00 FB]1	. A01.	100. 0	100000.0
64	5626B	9747.00 FBI1	. A02	199. 9	100000.0
_ 65	9626C	10186.00 FBI1	. FIØ3	100.0	100000.0
<b>9</b> 66	S604A	8210.00 FB11	. FI814	100.0	1.00000.0
67	S604B	9534.00 FBI1	. AØ5	1.00. 0	100000.0
68	5604C	9555.00 FEI1	. A06	100. 0	100000.0
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•					
_					

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\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 8:52:01 AM 30404040404040404040404040404 \*\*\*\*\*\*\*\*\* 9111.9065 RF" LEAD-THIRD IRRADIATION 18DEC79 1020:00 SAMPLE DATE: SAMPLE IDENTIFICATION: 5626ft TYPE OF SAMPLE: STANDARD SAMPLE QUENTITY: 9497, 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TRB1 ACQUISITION DATE: 19DEC79 108:45 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERRITIONS: 1.9. :4: DETECTOR: GELI-8

\* LIDRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KFV \* REUNDANCE LIMIT: 85. 00%

:4:

ENERGY WINDOW 499. 787 TO 674. 920

PK IT ENERGY FIRER BKGND FWHM CHANNEL LEFT PW CTS/SEC ZERR FIT 1 1 511.04 15338. 4675. 3, 15 1022: 50 1.011 23 2.556E 01 1.0 2.52E 00 2 9 559, 67 1995. 1040. 1.38 1119.67 1113 46 3.326E 00 3. 2 5. 40E 3 53 564.17 1.49968. 2.32 1.41.4. 11.28.66 1113 46 2.499E 02 Ø. 3 4 1 602, 82 4291. 732. 2.40 1205.91.1198 16 7.152E 00 1.8 2.88E 00 5 1 639.56 190. 2.90 504. 1279.33 1272 12 3.170E-01 18.2 4.72E 00 1 646. 91 555. 262. 2.90 1292. 22. 1284 15 4.371E--01 14.1 7.39E--

PERK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT EINERGY FIREA CONCENTR. ERROR CONSTRNT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.. 0 1.5338. 7.8000E-02 0.0000F-01 7.7314E-02 7.9199E-04 X-ANTIMONY 564.1 149968. 7.2000E-01 0.0000E-01 4.2817E-02 1.1160E-04 X-ARSENIC 657.4 Ø. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

deduction of the contract of t 19 DEC 1979 8:53:06 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\* <sup>1</sup>9111.9065 RF LEAD-THIRD IRRADIATION SAMPLE DATE: 1.8DEC79 1020:00 SAMPLE IDENTIFICATION: 5626B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9747.000 UNITS: LIG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAB1. ACQUISITION DATE: 19DEC79 119:20 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC :4: SENSITIVITY: 5.000 ELAPSED REAL TIME: 620. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERRITIONS: 10. :1: :4: DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% 

PK IT ENERGY AREA EKGND FWHM CHANNEL LEFT PW CTS/SEC **XERR** F17 1. 1 511.04 1.5183. 4744. 3.11 23 2.531E 01 1022, 49 1011 1.0 1.48E 00 2 5 559.71 1749. 1.046. 1.69 1.119. 75 1.109 30 2.916E 00 3. 5 5. 75E 3 5 564. 16 152944. 1134. 2.32 11.28.64 1109 30 2.549E 02 Ø. 3 4 1. 602.84 4435. 965. 2, 33 1205.95 11.96 20 7.392E 00 1.8 1.63E 00

674.920

1.3 4.368E-01 14.2 1.24E

1292. 28 1287

499. 787 TO

2.46

PEAK SEARCH COMPLETED

646. 04

EMERGY WINDOW

262.

562.

### STANDARD REPORT:

1

**D**ELEMENT ENERGY FIREA CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.. 0 15183. 7.8000E-02 0.0000E-01 7.5283E-02 7.7881E-04 Z-ANTIMONY 564.1 152944. 7. 2000E-01 0. 0000E-01 4. 2626E-02 1. 0980E-04 **%-ARSENIC** 657.4 Θ. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\* 19 DEC 1979 8:54:14 RM \*\*\*\*\*\* 91119065 RF LEAD-THIRD IRRADIATION SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: S6260 TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 10186, 00 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 19DEC79 129:53 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSHD REAL TIME: 622. SE'C \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10. :4: 

DETECTOR: GEL1-8 \* L1BRARY: NUCL, L1B4.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0 5003803 \* HOLELIEF COTTO: 0 00

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85 002

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ENERGY WINDOW 499, 787 TO 674, 920

PK IT ENERGY RREA BKGMD FWHM CHANNEL LEFT PW CTS/SEC MERR FIT 1 1 511.03 16885. 5400. 3. 10 1022, 47 1011 24 2.814E 01 1.0 1.96E 00 2 1.0 559.72 2199. 893. 1.33 1119.77 1107 39 3.665E 00 2. 9 6. 53E 3 10 564.15 1.63508. 2.32 1199. 1128.63 1107 39 2.725E 02 0.2 4 1. 602.80 4755. 1166. 2.29 1.205. 88 1195 21 7.925E 00 1.8 1.36E 00 5 1 645.87 546. 300. 12 5.006E-01 12.4 2.09E 2.74 1.291, 95 1.287 1. 657, 54 197. 529. 2.50 1315, 26 1307 14 3. 278E--01 18. 0 1. 12E

PERK SERRCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	FIREA	CONCENTR.	ERROR	CONSTRNT	ERROR
_	•			(1 SIGMA)		(1 SIGMA)
●%-COPPER	511 Ø	16885.	7. 8000E-02	0. 0000E-01	8. 0883E-02	7. 9703E- 04
%-ANTIMONY	564. 1	163508.	7. 2000E-01	0.0000E-01	4. 3688E-02	1 0883E-04
_ %-ARSENIC	657. 4	0.	0. 0000E01	0.0000E-01	0. 0000E-01.	0. 0000E-01.

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 13 DEC 1979 8:55:24 RM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\* 91119065 RF LEAD-THIRD IRRADIATION SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8210.000 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 19DEC79 140:28 \* FWHM(1332)2, 390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 644. SEC \* SHAPE PARAMETER : 15.0 % ELAF'SED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :k 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE L]MIT: 85.00%

ENERGY WINDOW 499, 787 TO 674, 920

PK IT ENERGY FREA BKGND FWHM CHANNEL LEFT FW CTS/SEC MERR . FIT 1. 1 511. 32 1180. 6803. 3.20 1023.05 1015 15 1.966E 00 10.3 1.14E 00 2 2 559, 19 27895. 4121. 2.39 1118, 72 1108 34 4.649E 01 Ø. 7 7. 97E 2 564.14 324814. 351.7. 2.34 1128.60 1108 34 5.414E 02 0.2 692.76 1 9358. 3328. 2.37 1205.80 1196 22 1.560E 01 1.4 2.58E 00 5 1 645, 86 649. 1540. 2.49 1291. 93 1285 1.4 1. 082E 00 9. 4 7. 99E-81 1 657, 11 2850. 1524. 2, 42 1314.42 1307 16 4.751E 00 2.7 2.93E

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY AREA CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1. SIGMA) %-COPPER 0.0000E-01.0.0000E-01.0.0000E-01.0.0000E-01. 511. 0 Ø. WHOMITMR-X 564. 1. 0.0000E-01.0.0000E-01 0.0000E-01 0.0000E-01 Ø. 1.0000E-01 0.0000E-01 8.6897E-03 2.3413E-04 X-ARSEMIC 657.4 2859.

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 8:56:26 RM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\* 91119065 RF' LEAD-THIRD IRRADIATION 18DEC79 1020:00 SAMPLE DATE: SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUENTITY: 9534, 999 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAD1 ACQUISITION DATE: 19DEC79 151:26 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 653. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10. \*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 1.. 750KV KEV/CHML: 0.5003803 \* HALF LIFE RETIO: 8. 99

OFFSET: -0.5932283 KEV \* FIBUNDFINCE LIMIT: 85. 00%

de

ENERGY WINDOW 499, 787 TO 674. 920

PK IT ENERGY FIREA BKGMD FMHM CHANNEL LEFT PW CTS/SEC ZERR FIT 1 1 510.76 1859. 8611. 4.03 1021.93 1013 17 3.099E 00 7.4 1.09E 00 2 3 559.18 32462. 4826. 2.40 1118, 70 1107 33 5.410E 01 0.68.33E 3 3 564. 1.3 2.34 1.128. 58 11.07 376951.. 4300. 33 6.268E 02 0.2 4 1 602, 79 10700. 3845. 2.35 1205.86 1196 20 1.783E 01 1.3 3.32E 00 5 1 646, 15 8.7 2.19E @ 820. 2145. 2.67 1292.50 1285 15 1.366E 00 1 657, 13 3073. 2380. 2.32 1314.45 1305 17 5.122E 00 2.9 1.69E

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY AREA CONSTANT CONCENTR. ERROR ERROR (1 SIGMA) (1. SIGMA) %-COPPER 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 51.1.. 0 0. %--ANT IMONY 564.1 Й. 0.0000E-01.0.0000E-01 0.0000E-01 0.0000E-01. 1.0000E-01 0.0000E-01 8.1062E-03 2.3347E-04 %-ARSENIC 657.4 3073.

8:57:28 AM \*\*\*\*\*\*\*\*\*\*\* 91119065 RF LEAD-THIRD IRRADIATION SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9555, 000 UNITS: LIG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TriB1 :1: ACQUISITION DATE: 19DEC79 202:33 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. **SEC** \* NBR ITERATIONS: 10. sk: æ DETECTOR: GELI-8 \* LIBRARY: NUCL, LIBS. DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. ØØZ 

ENERGY WINDOW 499.787 TO 674.920

PK IT ENERGY FIREFI BKGND FWHM CHANNEL LEFT PW CTS/SEC **XERR** FIT 1. 1 511. 00 1312. 6516. 3, 36 1022.41 1017 13 2 187E 00 9. 1. 8. 16E-01 2 3 559, 18 30614. 4641. 2.41 1118.69 1108 35 5.102E 01 0.78.20E 01 3 3 564.13 359029. 2.34 4012. 11.28. 59 11.08 35 5.984E 02 9. 2 4 1. 602.80 10447. 3281. 2.33 1205, 87 1197 18 1. 741E 01. 1.2 2.68E 00 ..... 1. 646, 11 749. 2231.. 2. 51 1292, 42 1.284 17 1.248E 00 9.61.43E 00 1. 657.12 3041. 2155. 17 5.069E 00 2.8 2.15E 2. 41. 1314.42 1307

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY AREA CONCENTR. CONSTANT ERROR ERROR (1 SIGMA) (1 SIGMA) 2-COPPER 511. 0 Ø. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 X-FINT I MONY 564.1 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 ₫. 1.0000E-01 0.0000E-01 8.0444E-03 2.2677E-04 %-ARSENIC 657.4 3041.

# SUMMARY OF STANDARD CONSTANTS:

1. ELEMENT %-COPPE	TP AT 50	1.1. AA KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
S626A	7. 8000E-02	7. 731.4E-82	(1 SIGMA) 7.9199E-04
S626B	7. 8000F-02	7. 5283E-02	7. 7881E-04
S626C:	7.8000E-02 	8. 0883E-02	7. 9703E-04
MEAN CONSTANT,	3 STDS:	7. 7785E-02	4. 5562E-04

# 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1. SIGMA)
S626A S626B	7. 2000E01 7. 2000E01	4. 2817E-02 4. 2626E-02	1.1160E-04 1.0980E-04
S626C	7. 2000E: 01 	4.3688E-02 	1. 0883E-04
MEAN CONSTANT,	3 STDS:	4.3050E-02	6.3544E-05

# 3. ELEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
يمن و ريس بسر سر			(1 SIGMA)
5604A	1. 0000E-01	8. 6897E-83	2. 3413E-04
9604B	1. 0000E-01.	8. 1062E-03	2. 3347E-04
S604C	1.0000E-01	8. 0444E-03	2. 2677E-04
MEAN CONSTANT.	~ <7'D<	8 2747F-07	4 7750F_0A

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0206A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11852.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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ACQUISITION DATE: 18DEC79 1426:37 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10:

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DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	PREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC			968. 8997. Ø. <	0. 0022 0. 0307 0. 0013	0. 0001 0. 0003 NOT DETE	4.3 1.1 ECTABLE
• 1009: 2 1018: 4 1027: 5	5. 77.	116. 1	19. 20. 38. 151. 20. 24.	1.64. 1.41	107.	38. 84. 23.
1117: 2: 1126: 69: 1135: 1	9. 1334.	1758. 18	27. 34. 33. 1579. 15. 16.	938. 420	). 109.	314. 32. 9.
1301: 1 1310: 1 1319: 1	5. 1.3. 0. 16.	7.	15. 12. 12. 17. 13. 14. CTED DATA.	20. 13 10. 14	t. 18. 4. 12.	1.0. 19. 15.
PK IT EN	ERGY FIR	:EA BKGNI	о ғынт	CHANNEL LEFT		SEC ZERR
2 1 56	1.06 S 4.19 89 2.84 2	97. 45	1. 2.27	1022.53 1013 1128.70 1118 1205.95 1197	20 1.613 22 1.500 16 4.139	E 01 1.1

91119065 RF' LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02068

SHAPALE IDENTIFICATION: 02068 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11527.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

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ACQUISITION DATE: 18DEC79 1436:54 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	FIREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	360.	8954.	0. 0022 0. 0315 0. 0012	0.0003	1. 1.
• 1009: 2 1018: 5 1027: 6		21. 2 1.06. 1. 35. 3	43. <b>1</b> 55.	156. 155	3. 37. 5. 110. 3. 23.	
1117: 2 1126: 74 1135: 1	0. 1295.	38. 1774. 175 11. 1		47. 58 937. 410 13. 14		272. 26. 17.
• 1301: 1 • 1310: 1319: 1	9. <u>13.</u> .3. 23.	8. :	20. 17. 11. 11. 18. 12. CTED DATA.	11. 14 18. 9	1. 14. 9. 16.	20. 10. 11.
PK IT EN	IERGY AF	EA BKGNI	Э БИНМ	CHANNEL LEFT	PW CTS/:	SEC ZERR
2 1 56	.1. 12	)54. 36(	a. 2.28	1022.65 1012 1128.70 1118 1206.07 1197	24 1.5591 20 1.4921 16 3.2931	E 01 1.1

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:00:56 AM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC:79 1020:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.3738, 00 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1447:09 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGND	HREI	a cond		SIGMA ERROR	ZERROR
X-COPPER •X-ANTIMONY X-ARSENIC	511. 1. 564. 2 657. 4	579. 472. 213.	1073	3. 61. 6	3317 ·	9, 0001 0, 0003 NOT DETECT	4.6 1.0 (ABLE
• 1009: 3 1018: 6 1027: 6		23. 113. 27.	18. 162. : 36.	27. 22 189. 162 28. 20	2. 1.79.	36. 1.22. 18.	41. 84. 26.
1126: 87	3. 34. 2. 1576. 9. 14.	43. 2101. 2 15.	31. 2126. 1: 5.	43. 50 854. 109: 13. 10	3. 543.	114. : 155. 16.	335. 33. 1.8.
• 1301: 2 • 1310: 2 1319: 1		17. 23. 15. E-UP CORF	12. 18. 16. ECTED D	1.2. 1; 18. 1; 19. ;	5. 20. 9. 14.	15. 13. 20. 1. 000	25. 9. 21.
PK IT EN		EA BKI			EL LEFT PW		: %ERR
2 1, 56	4.18 107	'33. <i>•</i>	579. 2. : 172. 2. : 185. 2. :	29   1128. (	59 1118 2	6 1.714E ( 3 1.789E ( 8 4.989E—(	31 1.0

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0207A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11259.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 1457:24 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+

ELEMENT	PEAK FNERGY B	KGND F	FIREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2		913. 0757. 0. C	0. 0022 0. 1112 0. 0016	0.0001 0.0007 NOT DETE	6. 2 0. 6 CCTABLE:
• 1009: 51. 1018: 69. 1027: 88.		2. 57. 4. 161. 9. 46.	57. 191. 39.	65. 52. 164. 168. 48. 46.	153.	66. 107. 49.
1117: 101. 1126: 2537. 1135: 36.	119. 14 4668. 618 22. 3		123. 5075. 17.	133. 162. 3275. 1470. 16. 16.	444.	1009. 81. 21.
• 1301: 18. • 1310: 16. • 1319: 25.	14. 1	8. 16.	13. 29. 22. D DATA.	20. 16. 23. 28. 17. 14. CORRECTION =	20. 17.	12. 18. 21.
PK IT ENER	GY AREA	BKGND	FWHM (	HAMMEL LEFT F	PW CTS/S	SEC ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li><li>3 1 602.</li></ul>	1.6 30757.	1133. 1830. 340.	2. 29 1	1022.71 1015 1128.65 1120 1205.85 1199	23 1. 5228 24 5. 1268 16 1. 3158	91 9.6

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02078

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8787.000 UNITS: UG

SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 18DEC79 1507:42 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:-}:

•	ELEMENT		PEAK ENERGY	EKGN	ID 1	REA	CONCER		1 SIGMA ERROR	ZER	ROR
•	%-COPPE %-ANTIN %-ARSEN	10NY	511. 1 564. 2 657. 4		1. 2	795. 4097. 0. <	0. 111	1.8	0. 0002 0. 0008 NOT DETE		6. 6 0. 7 E
•	1009: 1018: 1027:	39. 73. 58.	34. 81 47.	28. 104. 51.		37. 149. 29.	159.		89.		
•	1117: 1126: 1135:	69. 2050. 22.	95. 3624. 18.	82. 4790. 12.	95. 4616. 14.	95. 3955. 26.	97. 2563. 18.			755. 63. 17.	
•	1301: 1310: 1319:	13. 12.	14. 16.	18. 17. 17. E-UP CC	26. 15.	20. 9. 15. D DATA	16.	13. 10.	14.	12. 12. 17.	
	PK IT	ENER			KGND	FWHM	CHANNEL			SE.C	ZERR
•	) 1 1 2 1 3 1	511. 564. 602.		97.	965. 1031. 312.	3. 12 2. 33 2. 36	1.022. 60 1.128. 64 1.205. 68	1120	33 1.324E 19 4.016E 24 1.047E	E 01	6. 6 0. 7 5. 6

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0207C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9351.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TAB1

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ACQUISITION DATE: 18DEC79 1518:01 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:1

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8 00

\*

• ELEMENT	PERK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER ●X-ANTIMONY X-ARSENIC	564. 2		735. 24478. 0. <	0. 0022 0. 1069 0. 0016	0.0001 0.0007 NOT DETE	6. 3 Ø. 7 CTRBLE
• 1009: 43. 1018: 63. 1027: 61.	90. 1	36. 55. .10. 115. 46. 34.	144.	48. 53 153. 135 42. 41	. 4.1.9.	52. 66. 37.
1117: 90. 1126: 2066. 1135: 26.	87. 3718. 48 15.	99. 109. 373. 4967. 17. 23.	4083.		. 348.	807. 52. 11.
• 1301: 18. 1310: 13. 1319: 9.	11.	15. 16. 15. 15. 18. 7. IP CORRECTE	15. 14.	19. 19 19. 12	. 10.	16. 10. 13.
PK IT ENER		BKGND		CHANNEL LEFT		SEC ZERR
1 1 511. 2 1 564. 3 1 602.	16 24478.	707. 11.95. 406.	2. 27	1022.65 1013 1128.64 1121 1206.02 1195	18 1.2258 17 4.0808 29 1.2258	01 0.7

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:05:16 AM \*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\* 

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q208A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9073, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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:4:

ACQUISITION DATE: 18DEC79 1528:19 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 'ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL LIB1 DATE CALIBRATED:

260CT79 1434:06 \* FNERGY TOLERANCE: KEV/CHNL: 0.5003803

\* HALF LIFE RETIO: 8.00

OFFSET:

\* ABUNDANCE LIMIT:

-0.5932283 KEV

85. 00%

1. 750KV

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
X-COPPER 2-ANTIMONY X-ARSENIC	564. 2	1.105.	23913.	0. 00 <u>21</u> 0. 1079 : 0. 0015	0. 0007	
• 1009: 42. 1018: 52. 1027: 67.	74.	49. 35 105. 106 45. 33	. 142.		8. 62. 5. 95. 0. 34.	87.
1117: 84. 1126: 2019. 1135: 21.			. 3967.			779. 53. 15.
<b>1</b> 319: 9.	10. 8.	11. · 13 9. 13	. 19.	16. 1	6. 10.	18. 6. 19.
PK IT EMER		BKGND		CHANNEL LEFT		SEC XERR
1 1 511. 2 1 564. 3 1 602.	17 23913.	1.105.	2. 31	1022. 70 1013 1128. 67 1121 1205. 83 1196	17 3.9858	91 9.7

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q2088

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 10127.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

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ACQUISITION DATE: 18DEC79 1538:38 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV
KEY/CHNL: 0.5003803 \* HOLE LIFE POTTO: 0.00

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* RBUNDENCE LIMIT: 85.00%

JFFSET: -0.5932283 KEV \* RBUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

602.80

697.

171..

ELEMENT	PEAK ENERGY	BKGND	AR.	EA	CONCE		SIGMA ERROR	%ER	ROR
X-COPPER X-ANTIMON X-ARSENIC	511. 1 7 564. 2 657. 4	930. 182. 159.	265	04. 91 0. <	0. 003 0. 107 0. 001	76	0. 0001. 0. 0007 NOT DETE		5.8 0.6 E
1018:	32. 44. 73. 109. 54. 43.	38. 113. 42.	42. 1.27. 51.	36. 1.52. 42.	44. 174. 27.	47. 173. 30.	52. 117. 27.	54. 87. 34.	
112G: 22:	33. 120. l.2. 3965. l.6. 16.	124. 5231.	109. 5207 9.	108. 4351. 18.	103. 2730. 13.	146. 1207. 13.	296. 333. 17.	858. 68. 16.	
1310:	l3. 8. 7. 14. l2. 15. PULSE-PII	14. 10. 11. -EUP CORF	17. 21. 9. RECTED 1	1.7. 1.7. 10. DATA.	11. 11. 11. CORRECT	6. 6. 13. ION =	6. 10. 11. 1. 000	11. 14. 9.	
PK IT E	JERGY AF	REFI BK(	SND F	инм (	CHANNEL.	LEFT FW		5EC	ZERR
2 3 5	59. 56	752.	375. 2.	. 91 :	1022. 68 1119. 46 1128. 63	1112 2	4 1.507E 6 9.205E 6 4.432E	E-01	5. 8 6. 5 0. 6

2.34

1.205.88 1196

19 1.162E 00

4.6

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:07:25 AM \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF' LEAD-THIRD 1RRAD1ATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0208C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8632, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1548:56 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 694. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4: 

DETECTOR: GELI-8

\* LIBRARY: NUCL. L.181 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: --0. 5932283 KE'V \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGMD	ı	AREA	CONCE		1 SIGMA ERROR	%ERR(	OR 
%-COPPER ●%-ANTIMONY %-ARSENIC	511. 2 564. 2 657. 4	591 931 1.67	. 2:	638. 3814. Ø. <	0. 00: 0. 1.1: 0. 00:	33	0.0001 0.0008 NOT DETE	6. Ø. C:TABLE	
• 1009: 44 1018: 54 1027: 59	. 76.	37. 87. 21.	36. 1.08. 43.	39. 124. 32.		36. 110. 27.	51. 94. 22.	37. 84. 29.	
1117: 64 1126: 1880 1135: 18	. 3590.	72. 4619. 12.	89. 4754. 15.	95. 3942. 17.	105. 2574. 13.	132. 1118. 10.	264. 299. 17.	784. 60. 11.	
• 1301: 10 • 1310: 8 • 1319: 18	. 15.	7. 10. 11. EUP COR	12. 13. 10. RECTE	11. 18. 7. D DATA.	13. 16.	13. 11. 8. TION =	6. 19. 4. 1. 000	7. 13. 7.	
PK IT ENE	RGY AR	EA BK	GND	F ИНМ	CHANNEL.			SEC %	ERR
2 1 564	. 1.8 238	1.4.	591. 931. 390.	3. 28 2. 30 2. 14	1022. 74 1128. 68 1206. 03	111.9	17 1.064E 19 3.969F 40 1.076E	: 01 0.	7 7 8

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DFC79 1020:00 SAMPLE IDENTIFICATION: 0209A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11542.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:**|**:

:**}**:

ACQUISITION DATE: 18DEC79 1559:14 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

the sale than the second that the second that the second

DETECTOR: GEL.I-8 \* LIBRARY: NUCL. LIB1

ELEMENT	PEAK ENERGY	BKGMD		AREA	CONCER		L SIGMA ERROR	ZER	ROR
X-COPPER ●X-ANTIMON X-ARSENIC	7 564. 2	414. 473. 109.	. :	798. 8388. Ø. (	0.002 0.029 0.001	9	0.0001 0.0003 NOT DETE		5. 1. 1. 2 .E
1018:	12. 10. 47. 69. 53. 37.	28. 82. 21 <sub>.</sub>	17. 120. 20.	20. 146. 20.		19. 117. 18.	89.	35. 75. 20.	
	25. 26. 56. 1289. 6. 7.	38. 1684. 11.	26. 1695. 7.	21. 1397. 5.		51. 401. 11.		264. 23. 9.	
1301: : 1310: 1319:	8. 7.	11. 7.	6. 8.	16. 8.	9.	10. 4. 5. CION =	1.0.	8. 8. 8.	
PK IT EI	VERGY AF	REA BKI	GMD	FWHM	CHANNEL	LEFT PA	√ CTS/9	5EC	%ERR
2 :1 5:	54.16 83	:88. ·	41.4. 473. 143.	2. 26	1022. 59 1128. 65 1205. 99	1120 2	24 1.3316 22 1.3986 22 4.2116	91	5. 1 1. 2 9. 2

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02098

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11403.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TADS

:1:

ACQUISITION DATE: 18DEC79 1609:29 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0. 5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:je

ELEMENT	PERK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC		409.	8730.		0. 0001. 0. 0004 NOT DETE	1 1
• 1009: 19. 1018: 53. 1027: 46.	64.	12. 31. 104. 124. 23. 15	. 146.	1.47. 1.22.		
1117: 18. 1126: 711. 1135: 11.	1285. 1.		. 1463.	44. 57. 984. 417. 8. 7.	120.	262. 26. 6.
• 1301: 11. • 1310: 10. 1319: 11.	7. 10.	11. 3 11. 8 8. 11 UP CORRECT	. 9. . <b>11</b> .	6. 8.	10.	7. 7. 6.
PK IT ENER				CHANNEL LEFT (		EC %ERR
<ul><li>1 1 511.</li><li>2 1 564.</li><li>3 1 602.</li></ul>	20 8730	. 409.	2. 33	1.022. 58 1014 1128. 72 1119 1206 18 1200	20 1.446E 19 1.455E	01 1.1

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0209C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9654.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:‡:

ACQUISITION DATE: 18DEC79 1619:43 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

8 \* LIBRARY:NUCL.L1B1

:**:**:

JFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

602, 81,

21.3.

1.73.

ELEMENT	PEAK ENERGY BK	(GND I	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 2 657. 4	312. 247. °	746. 7524. 0. <	0.0023 0.0322 0.0012	0. 0001. 0. 0004 NOT DETER	5. Ø 1. 2 CTABLE
1009: 13. 1018: 38. 1027: 43.	16. 17 63. 92 14. 24	2. 97.	11. 120. 15.	12. 1.7. 11.1. 122. 12. 1.0.	80.	30. 47. 13.
1117: 15. 1126: 592. 1135: 4.	20. 19 1126. 1463 4. 4		23. 1259. 6.	30. 36. 798. 358. 6. 7.	104.	254. 10. 9.
1301: 12. 1310: 5. 1319: 8.	6. 1.3	". 6.	5. 7. 11. D DATA.	3. 7. 10. 7. 5. 5. CORRECTION =	5. 8.	7. 6. 4.
PK IT ENER	GY AREA	EKGND	FWHM С	CHANNEL LEFT F	°W CTS/SI	EC ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li></ul>		312. 247.		022. 47 101.3   128. 68 1119	25 1. 243E 19 1. 254E	00 5.0 01 1.2

2. 24

1205.89 1195

30 3.549E-01 11.1

\*\*\*\*\*\*\* 19 DEC 1979 9:11:45 AM \*\*\*\*\*\* \*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7485, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 1629:58 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

147.

665, 54

668.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEVZCHNL: 0.5003803

\* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

1. 750KV

## UNKMOWN SAMPLE REPORT

ELEMEN	Υ		EAK ERGY	BK0	3ND	AREA	CONCE	NTR.	1 SIGMR ERROR		ERRC	)R
%-copp			10. S			886.		36			10.	8
2-ANTII 2-ARSE							9. 78					
F# 1 11 % (1)	147.7%		w1(	<i>a</i>	ງວຍ.	4013.	0. 15	21	0. 0040		2.	6
1009:			231.	226.	258	. 269.	235.	255.	298.	297	2.	
1018:			329.	354.	359	. 405.	414.	365.	310.	313	2.	
1027: )	265.		234.	273.	251	. 246.	253.	241.	248.	242	2.	
1117:			643.	9769.	8125	. 5501.	2736.	1454.	1739.	4998	3	
1126::		21.	521.	27676.	27753	. 22479.		6439.				
1135:	162.	:	1.60.	1.53.	1.45	. 140.		161		144		
1301:	•		73.	71.	68	. 65.	78.	82.	82.	103	1	
1310:	124.	1	277.	562.	855	. 964.	1011.	853.	519.			
1319:			66.	64.	66	. 49.	62.		56.	68		
•	ŀ	'ULS	E-PII	E-UF, C	CORRECT	ED DATA.	CORREC	T10M =	1. 000			
PK IT	ENER	CGY	FIF	₹E'A	BKGND	FWHM	CHANNEL	LEFT F	PW CTS	/SEC	ΧE	ERR
1 1		96	8	386.	4112.	2. 85	1022. 13	1014	16 1. 47	7E 00	10.	8
2 2		17	485	525.	2208.	2. 31.	1118.68		32 8.08		Ø.	
2 2 3 2 4 1			1415		1745.	2. 33	1128. 59		32 2.35	9E 02	Ø.	
• •••			37		1284.	2. 32	1205.85	1198	16 6. 24	9E 00	2.	1
5 1.			•		1.118.		1.292. 48	1286	17 5. 94	0E-01		
6 1	657.	1.4	48	313.	2590.	2. 37	1314, 46	1303	28 8. 92;	2E 00	2.	1.

2. 32

1331. 24 1330

9 2.445E-01.26.3

9:12:54 AM \*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\* \*\*\*\*\*\* 91119065 RF LEAD-THIRD IRRADIATION SAMPLE DATE: 18DEC79 1020:00

SAMPLE IDENTIFICATION: 0211 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY:

10875.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TAB1

ACQUISITION DATE: 18DEC79 1640:37 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5. 999 ELAPSED REAL TIME: 638. SEC \* SHRIPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

:4:

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

657.14

665.37

1

7885.

491.

2090.

1284.

ELEMENT		PEAK ENERGY	BKG	ND	AREA	CONCE	NTR. 	1 SIGMA ERROR	%EF	ROR
%-COPPER %-ANTIMO %-ARSENI	<b>'</b> - ' <sub>T</sub> '	51.1. 1 564. 1 657. 1	66 30 20	54. 20	1.682. 9950. 7885.	9, 99, 9, 89( 9, 1.7)	32	0. 0003 0. 0021		7. 3 0. 3
1009: 1018:	408. 418. 438.	397. 477. 415.	382. 552. 408.	383. 559. 392.	7 660. 392. 537. 377.	389. 598.	se 404. 561. 353.	533.	408. 486. 345.	2. 1
1117:11 1126:18 1135:		14750. 32000. 276.	1.4736. 40656. 237.	1.2358. 40933. 225.	8143. 33226. 259.	4245. 21147. 233.	21.46. 9258. 233.	3011. 2787. 230.	7880. 744. 244.	
1310:	11.7. 225. 177. PUI	125. 383. 121. LSE-P1L	1.12. 857. 104. .E-UP C	1.32. 1.336. 90. ORRECTE	105. 1596. 85. D DATA.	110. 1597. 76. CORREC	122. 1286. 101. TION =	123. 807. 197. 1. 000	142. 432. 98.	
PK IT	ENERG'			EKGND	FШНМ	CHANNEL			SEC:	ZERR
2 2 3 2 4 1	511. 1) 559. 1! 564. 1: 602. 7:	5 741 2 2095 8 54		6651. 3396. 3054. 2346.	3. 78 2. 32 2. 35 2. 30	1022.60 1118.64 1128.58 1205.83	1109	18 2.803 31 1.235 31 3.499 17 9.105	E 02	7. 3 0. 4 0. 2 1. 8
5 1.	645. 6	7 3	:88.	2525.	2. 32	1291.55	1281	20 6.473	E-01 1	LS. 0

2.37

1. 99

1314.47 1303

1330.92 1324

21 1.314E 01

13 6.680E-01 13.6

\*\*\*\*\*\* 19 DEC 1979 9:14:04 AM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8525, 999 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAD1

ACQUISITION DATE: 18DEC79 1651:27 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 19.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

-0.5932283 KEV \* FIBUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

OFFSET:

1

665.40

ELEMENT	PEAK ENERGY B	KGND	AREA	CONCE	VTR.	1 SIGMA ERROR	%EF	ROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. J	1845. 16		,		0. 0023		8. 0 0. 3 2. 3
	378. 36	3. 304. 5. 443. 3. 281.	458.	461.	291. 401. 282.	369.	311. 397. 286.	
	10937. 1129 24466. 3098 187. 17	9. 31.485.	2571.7.	16469.	1.716. 7294. 163.	2142.	5700. 543. 1.84.	
• 1310: 152. 1319: 142.			1.208. 73.	72.	939. 70.	636. 82.	1.04. 292. 73.	
PK IT ENER		BKGND	FWHM	CORRECT CHANNEL			5E:C:	%ERR
<ul> <li>1 1. 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> <li>5 1 646.</li> <li>6 1 657.</li> </ul>	18 56966, 14 160709, 74 4352, 12 266,	4786. 2506. 1845. 1895. 1151. 1640.	3. 64 2. 36 2. 34 2. 41 2. 16 2. 42	1022, 57 1118, 70 1128, 60 1205, 74 1292, 44 1314, 44	1107 1107 1195 1286	17 2. 169 34 9. 494 34 2. 678 19 7. 253 14 4. 437 20 9. 689	= 01 = 02 = 00 =-01 1	8.0 0.4 0.3 2.1 19.0

2. 04

1330.98 1323

14 5.346E-01 15.3

1036.

321.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:15:12 AM \*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*

91119065 RF LEAD-THIRD ]RRAD]ATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8987, 999 UNITS: UG

SAMPILE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 18DEC79 1702:10 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

1. 750KV \* HALF LIFE RATIO: 8.99

0.5003803 KEV/CHNL:

1330.72 1325

12 6.199E-01 12.6

OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

665, 27

372.

909.

ELEMEN	1T	PER ENER		KGND	AREI	9 0	ONÇE!	YTK.	1. SIGMF ERROR		ROR
%-COPF %-ANT) %-ARSE	MONY	519 564 657	1. 1.	3809. 21.09. 1520.	103: 1.6291:	2.	0. 003 0. 754	43	0. 0003 0. 0023	<u>:</u>	9. Ø Ø. 3
. Ca   1115		001		loze.	581	₹.	0. 155	) <del>8</del>	0.0036	)	2. 3
1009:		22	99. 28	5. 30	<b>3</b> 3. :	307.	327.	290.	302.	31.2.	
1018:	306.	37	<sup>7</sup> 4. 40	15. 43	24.	458.	429.	408.	397.	321	
1027:	309.	29	93. 28	17. 29	99. :	273.	267.	283.	275.	305.	
1117:	8401.	1089	01. 1122	2. 929	97. <b>6</b> ;	202. <u> </u>	220.	1706.	2202.	5837.	
1126:	14087.	2495	56. 3159	8. 3161			596.	7396.	2136.	539.	
1135:	222.	19	90. 17	<b>1.</b> 16			1.66.	167.		178.	
1301.:	85.	8	39. 8	17. 7	<sup>2</sup> 9.	80.	92.	86.	79.	93.	
1310:			?7. 63				.161.	955.	578.	302.	
1319:					96.	64.	67.	78.		76.	
			-FILE-UF					rion =	1. 000	r C.	
PK 17	T ENER	RGY	ARE.A	BKGNE	) ғы	-1М С:НА	NNEL	LEFT F	W CTS	7/SEC	%ERR
1 1	510.	90	1.039.	3809	9. 3.:	19 1.02	2. 22	1016	13 1.73	:2E 00	9. 0
2 3		17	55533.	2330			.8. 68	1108	33 9. 25		Ø. 4
2 2	? 564.	13 1	L62912.	2109				1108	33 2.71		0. T 0. 3
4 1	. 602.		4295.	2277					22 7. 15		2. 2
5 1	657.	11	5814.	1520			4. 42		20 9.69		1. 6
و بير		AP. 1111			·				3000 (m) 100 (m)	The last the same	(L)

2.46

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0214

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9092.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TAB1.

:4:

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ACQUISITION DATE: 18DEC79 1712:52 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 10.

**>** 

100 to Jan Seat - 5-4 - 5-5 - 5-4 -

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.1B1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

5

1

1.

657.17

664. 91

4693.

28.

5814.

797.

	ELEMENT		PEAK NERGY	BKG	ND I	AREA	CONCE	4TR.	1 SIGMA ERROR	%ERRC	)R
•	%-COPPER %-ANTIMO %-ARSENI	<b>!</b> -1'τ'	564. 1	17	73. 15:	5214.	0. 71:	L7	0. 0003 0. 0021. 0. 0040	염.	3
	1009: 1018: 1027:	308.		341.		434.	312. 387. 260.	385.	377.	287. 314. 270.	
•	1117: 7 1126:13 1135:	267. 2		30268.	30473.	24912.	3000. 15899. 142.	1566. 7058. 150.		501.	
•	1310:	138. 127.	252. 83.	540. 63.	880. 74.	970. 48.	1053. 67.	880. 55.	65.	104. 267. 92.	
		ENERGY	' FIF	REA	ORRECTEI BKGND	D DATA. FWHM	CHINNEL			SEC %E	ERR
	2 2 3 2 4 1	511.02 559.18 564.14 602.82	509 1552 41	167. 214.	3555. 2395. 1773. 1568.	2. 46 2. 35 2. 32 2. 38	1022. 45 1118. 70 1128. 60 1205. 91	1107 1107	1.2 1. 096 35 8. 344 35 2. 587 17 6. 888	E 01 0. E 02 0.	5 3

2.31

8.85

1314.53 1280

1330.00 1330

51

7.822E 00

9 4.694E-02 \*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0215A

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 11810.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

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4

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB4.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

### UNKNOWN SAMPLE REPORT

1

645, 94

335.

754.

ELEMENT	PEAK ENERGY	BKGN	ID i	FREA	CONCE	4TR.	1 SIGMA ERROR	%EF	RROR
%-COPPER %-ANTIMONY %-ARSENIC	511 0 564. 1. 657. 4	576 146 73	9. 17:	3968. 1640. 0. <	0. 082 0. 607 : 0. 002	"(d	0. 0007 0. 001.7 NOT DET	ECTABL	0. 9 0. 3 .E
1009: 282 1018: 1402 1027: 1361	. 2266.	250. 3259. 574.	277. 4218. 344.	297. 4830. 300.	354. 4860. 245.	444. 4076. 232.	3188.	829. 221.0. 211.	
1117: 469 1126:14606 1135: 182	. 25782.	680. 33189. 128.	596. 33530. 135.	643. 27477. 116.	640. 17895. 113.	878. 7838. 121.	2262.	5667. 483. 101.	
1301: 57 1310: 54 1319: 59	43.	51. 49.	44. 74. 52. IRRECTEI	45. 71. 45. D DATA.		55. 64. 48. ION =	60. 51.	43. 50. 37.	
PK IT ENE	RGY AR	EA E	KGMD	FWHM	CHANNEL	LEFT F	PW CTS/	'SEC	%ERR
2 9 559 3 9 564	. 03 309 . 64 22 . 15 1716 . 82 45	24.	5766. 1105. 1469. 1143.	3. 15 1. 39 2. 33 2. 36	1022. 47 1119. 61 1128. 62 1205. 92		24 5.161 36 3.707 36 2.861 17 7.593	E 00 E 02	0. 7 3. 0 0. 2 1. 8

2. 51

1292.09 1285 15 5.591E-01 12.8

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02158

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9062.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

:4:

ACQUISITION DATE: 18DEC79 1.734:13 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434;06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0. 5003803 \* HALF LIFE RATIO: 8. 00

\*

### UNKNOWN SAMPLE REPORT

645, 89

231.

570.

•	ELEMENT	79 ~ 10000 10000 10000 001 0 001	PEAK ENERGY	BKG	ND 	AREA	CONCE	NTR.	1 SIGMA ERROR	%EI	ROR
•	X-ANTIM	10NY	511. Ø 564. 2 657. 4	49	64. 12	9892.	0. 08: 0. 59: 0. 00:	98			
•	1009: 1018: 1027:	1017.	1734.		3257.		3524.	3056.	445. 2473. 179.	1.702.	
•	1117: 1126:1 1135:	371 .1025. 109.	430. 19650. 85.	485. 25272. 89.	449. 25755. 80.			731 6236. 73.	1831.		
•	1301: 1310: 1319:	32. 37.	31.	33. 33.	54. 26.	43. 26.	50. 32.	42. 37.	33. 34. 21. 1. 888		
•	PK IT	ENER			BKGND	- FWHM	CHRINNEL			SEC	ZERR
•	1 1 2 1 3 1	564. 602.	79 3	892.		3. 24 2. 31 2. 45	1022. 43 1128. 64 1205. 84	1120	24 3. 945 1.8 2. 165 1.9 5. 987	E 02	0.8 0.3 2.0

2.50

1291.. 98 1286

14 3.852E-01 16.0

91119065 RF LEAD-THIRD TRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0215C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9175.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TABL

:**†**:

ACQUISITION DATE: 18DEC79 1744:43 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HOLE LIFE POTIO: 0.00

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGN	ID F	REA	CONCEN	TR.	1 SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	511. 0 564. 2 657. 4	496 117 54	'4. 135	1450. 1956. 0. <	0. 085 0. 621 0. 003	2	0.0008 0.0019 NOT DE1	1. 0 0. 3 ECTABLE
• 1009: 213. 1018: 1118. 1027: 1097.	235. 1804. 683.	221. 2552. 403.	246. 3262. 314.	279. 3735. 223.	280. 3742. 192.	318. 3297. 182.	477. 2555. 159.	693. 1760. 159.
1117: 359, 1126:11415, 1135: 104,	490. 20386. 88.	496. 26049. 82.	501. 26529. 114.	465. 21829. 69.	557. 14273. 79.	779. 6339. 91.	1612. 1830. 56.	4495. 392. 65.
• 1301: 34. 1310: 35. 1319: 43.	40. 37. 33. ULSE-PIL	40. 42. 29. .EUP CO	27. 52. 42. JRRECTEL	38. 60. 24. DATH.	33. 49. 36. CORRECT	40. 60. 34. ION =	32. 41. 33. 1. 000	31. 35. 38.

3 9 564.15 135956. 1174. 2.34 1128.64 1110 28 2.266E 02 0. ● 4 1 602.79 3590. 792. 2.38 1205.86 1196 18 5.983E 00 2.	PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	РЫ	CTS/SEC	%ERR
5 1 645.92 265. 711. 2.56 1292.05 1285 18 4.415E-01 15.	2 3 4	9 9 1	559, 68 564, 15 602, 79	2156. 135956.	805. 1174.	1. 36 2. 34 2. 38	1119.70 1128.64 1205.86	1110 1110 1196	28 28 18	3. 593E 00 2. 266E 02 5. 983E 00	2. 8 0. 3 2. 0

\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:21:03 AM \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\* **\**\* 91119065 RP LEAD-THIRD IRRADIATION SAMPLE DATE: 18DEC:79 1,020:00 SAMPLE IDENTIFICATION: Q216A TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 10107.00 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1755:18 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

:4:

## UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGN	ID I	AREA	CONCE		1 SIGMA ERROR	ZERROR
X-COPPER ● X-ANTIMONY X-ARSENIC	511. 1 564. 2 657. 4	613 466 47	5 <b>0</b> . 1.3:	4860. 3697. 0. <	0. 079 0. 559 0. 003	56	0. 0008 0. 0018 NOT DET	1.0 0.3 ECTABLE
• 1009: 222. 1018: 1107. 1027: 1049.	230. 1740. 695.	241. 2605. 418.	224. 3392. 281.	240. 3848. 228.	313. 3875. 190.	349. 3448. 178.	470. 2671. 180.	715. 1772. 169.
1117: 338. 1126:11362. 1135: 116.	387. 19932. : 108.	384. 26034. 75.	401. 26613. 88.	426. 21938. 73.	514. 13847. 74.	664. 6258. 74.	1535. 1830. 66.	451.8. 402. 69.
• 1301: 48. 1310: 31. 1319: 44.	40. 42. 32. JLSE-FIL	32. 25. 29.	42. 35. 28.	27. 43. 38.	35. 35. 31.	28. 47. 38.	32. 28. 37.	37. 45. 33.
PK IT ENERG	3Y AR		KGND	O DATA. FWKM	CORRECT	LEFT P	1.000 W CTS/	SEC XERR

1. 511.07 24860. 6130. 3.13 1.022. 54 1.011 31. 4. 143E 01 Ø. 8 1 564. 1.6 133697. 4669. 2. 31 1128.64 1119 20 2.228E 02 0.3 1 602. 77 3550. 1339. 2.34 1205.81 11.95 21 5.916E 00 2.2 645, 71, 296. 51.1. 3.04 1291.62 1285 14 4.937E-01 12.3

\* 19 D<u>E</u>C 1979 9:22:10 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\* 91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q216B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8743, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:4:

ACQUISITION DATE: 18DEC79 1805:48 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

UNKNOWN SAMPLE REPORT

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		1 SIGMA ERROR	XERROR
X-COPPER X-ANTIMONY	511. 1 564. 2	4937. 4235.	21270. 114505.	0. 079 0. 551		0. 0008 0. 0019	1. 0 0. 3
%-ARSENIC	657. 4	384.	Ø.	C 0.002	27	NOT DETE	
• 1009: 183. 1018: 956.	204. 1582. ;		32. 224 341. 3364		296. 2867.		584. 1552.
1027: 941.			:36. 198		170.		144.
1117: 298. 1126: 9543.	323. 17277. 2:	340. 3 2344. 224	:27. 379 :62. 18737		595. 5508.	1242. 1612.	3803. 335.
<ul><li>1135: 87.</li></ul>	S4.		68. 57		o.mo. 63.		.s.ə. 53.
_		38. 30.			30. 27.		26. 22.
1319: 28. Pi	28. ULSE-PILE		19. 33 CTED DATA	. 19.	31.	23.	20.
PK IT ENER	GY AREI	a BKGM	ID FWHM	CHANNEL	LEFT F	W CTS/S	SEC ZERR
• 1 1 511.1 2 1 564.				1.022. 52 1128. 64		29 3.545B	
2 1 564.5 3 1 602.5 4 1 646.5	8 <mark>1. 304</mark> ;	2. 84	l0. 2.32		11.98	22 1.9086 21 5.0706 13 3.9546	. 00 2.3

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0216C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8482.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:†:

:4:

ACQUISITION DATE: 18DEC79 1816:19 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 18.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2	3596.	106301	0. 0769 0. 5283 0. 0027		Ø. 3
• 1009: 175. 1018: 950. 1027: 867.	1477.	178. 18 1991. 271 284. 23	L7. 3094.	2985. 2699.		1.365.
1117: 283. 1126: 8770. 1135: 102.		325. 34 0954. 2111 54. 6	LO. 17100.	395. 565 11164. 5040 49. 48	. 1528.	3606. 292. 52.
• 1301: 29. 1310: 33. 1319: 25.	26. 26.	30. :	29.	32. 31. 30. 20	. 42. . 34.	24.
PK IT ENER				CHANNEL LEFT		SEC ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li><li>3 1 602.</li></ul>		<b>1</b> . 3596	5. 2.31.	1022.48 1011 1128.64 1118 1205 89 1192	32 3. 284 21 1. 772 19 4 976	E 02 0.3

\*\*\*\*\*\*\* 9:24:20 AM \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q217A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9827, 999 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1826:49 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

•	ELEME'N1	•	PEAK ENERGY	BKG	ND I	AREA	CONCEN	ITR.	1 SIGMA ERROR	%ERRC	JR
	X-COPPE X-ANTIM X-ARSEN	10NY	511. 0 564. 2 657. 4	47: 53: 5		5406. 5727. 0. C	0. 055 0. 716 0. 002	6	0.0006 0.0021 NOT DET	1. Ø. FECTABLE	
•	1009: 1018: 1027:	283. 853. 844.	263. 1.322. 553.	249. 1794. 365.	252. 2379. 279.	282. 2662. 228.	246. 2692. 201.	327. 2292. 211.	420. 1.727. 231.	567. 1290. 220.	
•	1117: 1126:1 1135:	370. .4001. 161.	380. 25196. 125.	435. 32333. 139.	409. 32540. 113.	484. 26926. 92.	629. 17395. 95.	855. 7827. 94.	1939. 2379. 108.	5546. 497. 100.	
•	1301: 1310: 1319:	61. 42. 44.	39. 47. 49.	56. 53. 29.	38. 40. 41.	44. 52. 41.	46. 46. 34.	43. 39. 47.	36. 43. 45.	39. 43. 36.	
_		F	ULSE-PI	LE:UP C	ORRECTE	) DATA.	CORRECT	ION =	1. 000		

Pk	( IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	РЫ	CTS/SEC	XERR
	2 1			4793. 5399. 1.017. 1.249	2. 33 2. 44	1128. 63 1205. 85	1118 1197	23 18	2. 734E 01 2. 779E 02 7. 881E 00 3. 020E-01.	0.3 1.7

\*\*\*\*\*\*\* 1.9 DEC: 1979 9:25:27 AM \$ 

9111.9065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q217B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9596, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1837:24 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL, LIB1 DATE CALIBRATED: \* ENERGY TOLERANCE:

260CT79 1.434:06 KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

750KV

41.

UNKNOWN SAMPLE REPORT

PEAK 4. SIGMF ELEMENT. ENERGY BKGND AREA CONCENTR. ERROR ZERROR %-COPPER 511. 0 5106. 15607. 0.0548 0.0006 1. 2 %-ANTIMONY 564. 2 4300. 156083. 0.6883 0.0021 0.3 **%-ARSENIC** 657.4 489. Ø. < 0.0028 NOT DETECTABLE

1009: 215. 218. 217. 224. 266. 263. 327. 367. 489. 1018: 759. 1.1.75. 1781. 2238. 2416. 2454. 2280. 1649. 11.74. 1027: 717. 492. 323. 305. 230. 215. 188. 173. 205. 1117: 307. 319. 494. 453. 495. 603. 861. 1778. 5147. 1126:13039. 23215. 30828. 30243. 25312. 7437. 1.631.2. 2182. 512. 1135: 147. 114. 1.10. 84. 109. 85. 79. 82. 75. 1301: 37. 34. 44. 44. 38. 40. 39. 39. 42. 1310: 43. 42. 38. 35. 44. 35. 39. 36. 35.

1319: 29. 36. 30. 37. 34. 26. 44. PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1. 000

PK IT ENERGY FIREA BIKGND FWHM CHANNEL LEFT PW CTS/SEC **XERR** 1. 1 511.03 1.5607. 5106. 3.17 1022.47 1011 25 2.601E 01 1.0 2 1 564.16 156083. 4300. 2.32 1128.65 11.1.8 21 2.601E 02 Ø. 3 3 1. 602.79 1916. 4229. 2.32 1205.85 1197 17 7.048E 00 1. 9 4 646, 1.4 384. 680. 2.75 1292, 48 1284 18 6.400E-01.10.9

\* 19 DEC 1979 9:26:37 AM \*\*\*\*\*\* 

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC:79 1020:00 SAMPLE IDENTIFICATION: Q217C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10423, 00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 18DEC79 1847:58 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* EMERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO:

8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

ELEMENT	PEAK EMERGY	BKGND	AREA	CONCE		1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 1. 564. 2 657. 4		6566. 51.18. 0. <	Ø. 71.2		9. 9996 9. 9929 NOT DETI	1. 2 0. 3 ECTABLE
• 1009: 263. 1018: 879. 1027: 863.		:68. 257. :50. 2350. :61. 286.	294. 2786. 229.		319. 2311. 216.	386. 1908. 208.	593. 1265. 227.
1117: 349. 1126:14729. 1135: 183.	26351. 337	38. 472. 31. 34293. 29. 108.	535. 28449. 137.		944. 8302. 1.07.	1988. 2474. 91.	5836. 558. 102.
1301: 53. 1310: 47. 1319: 41.	45. 48.	34. 54. 46. 33.	46. 47. 48.	44.	45. 52. 51.		39. 39. 30.
PK IT ENER	ULSE-PILE-U GY AREA	IP CORRECTE EKGND		CHANNEL			SEC ZERR
1 1 511. 6 2 1 564. 3 3 1 602. 3 4 1 646. 6	15 175118. 84 4720.	5931. 5093. 1305. 709.	3. 08 2. 33 2. 39 2. 82	1022. 51 1128. 64 1205. 95 1292. 26	1118 1196	25 2. 7611 21 2. 9191 20 7. 8671 15 5. 8121	E 02 0.2 E 00 1.8

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0218A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9990.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 1858:37 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:+

DETECTOR: GCLI-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

646, 02

85.

149.

ELEMENT	PEAK ENERGY	BKGNI	) <u> </u>	AREA	CONCE		1 SIGMA ERROR	ZERF	 ROR
%-COPPER %-ANTIMON	510.9 7 564.2			743. 3648.	0. 00: 0. 1.30		0. 0002 0. 0008		7. 1 3. 6
%-ARSENIC	657. 4			Ø. <			NOT DETE		
1009: .	42. 46.	63.	58.	44.	39.	47.	44.	58.	
1018: :	39. 119.	112.	123.	153.	152.	139.	96.	82.	
1027:	59. 60.	49.	39.	41	33.	36.	32.	35.	
	1.3. 126.	115.	137.	105.	126.	172.	344.	976.	
<b>_ 1126: 24</b> :		6005.	6001.	5122.	3401	1511	468.	81.	
<b>)</b> 1135: ;	22. 21.	11.	26.	12.	1.1.	17.	8.	15.	
1301:	7. 10.	12.	14.	12.	12.	7.	10.	11.	
	11. 19.	1.1.	8.	20.	14.	15.	13.	15.	
1319:	8. 12.	13.	r.	8.	1.0.	6.	9.	8.	
<b>L</b>	PULSE-PI	LE-UP CO	RRECTE	D DATA.	CORREC:	riow =	1. 000		
PK IT E	NERGY A	REA BI	KGND	FWHM	CHANNEL	LEFT F	W CTS/9	SEC :	KERR
	10. 91	743.	997.	3. 42	1.022. 23	1012	21 1. 239E	: 00 :	7. 0
	54. 18	648. ;	2081.	2. 32	1128.69	1120	29 5. 108E	E 01. (	ð. 6
3 1 6	92. 77	890.	345.	2. 29	1.205, 81,	1195	20 1.4838	E 00 .	4. 4

2. 62

1292, 25 1288

11 1.414E-01 23.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:28:47 AM \*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION:

Q218B TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8442, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1908:55 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.181.

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER •%-ANTIMONY %-ARSENIC	564. 2		692. 24144. 0. <	Ø. 121.7	0. 0002 0. 0008 NOT DETE	6. 7 Ø. 7 CCTABLE
• 1009: 39. 1018: 58. 1027: 51.	75. 1	34. 20. 09. 125. 50. 34.		132. 19	26. 39. 34. 91. 42. 40.	35. 81. 31.
1117: 68. 1126: 1946. 1135: 12.	3580. 47	93. 94. 34. 4772. 10. 12.		261.6. 1.23	32. 254. 34. 360. 18. 8.	743. 62. 14.
• 1301: 12. • 1310: 9. • 1319: 7.	6.	8. 8. 5. 14. 10. 7. P CORRECTE	7. 4.	15. : 6.	9. 9.	9. 10. 10.
PK IT ENER		BKGND		CHANNEL LEFT		SEC ZERR
1 1 510. 2 1 564. 3 1 602.	18 24144.	714. 1021. 179.	2. 32	1022. 15  101: 1128. 69  1120 1205. 96  119;	3 1.9 4. 02.4E	E 01 0.7

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0218C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9473.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

\*

ACQUISITION DATE: 18DEC79 1919:14 \* FWHM(1332) 2,390
PRESET TIME(LIVE): 600, SEC \* SENSITIVITY: 5,000
ELAPSED REAL TIME: 604, SEC \* SHAPE PARAMETER: 15,0 %
ELAPSED LIVE TIME: 600, SEC \* NBR 1TERATIONS: 10,

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY		AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	1173.		0. 0025 0. 1262 : 0. 0016	0.0002 0.0008 NOT DETE	9. 6
• 1009: 34. 1018: 70. 1027: 57.	92.	42. 3 100. 12 36. 4		131. 117	l. 45. ?. 1.14. 3. 47.	60. 78. 44.
1117: 96. 1126: 2233. 1135: 18.	109. 4184. 5 17.	106. 13 621. 559 17. 1			ł. 365.	886. 95. 16.
● 1310: 5. 1319: 7.	11.	1.3.	9. 9.	13. 15	5. 9. ?. 7.	14. 10. 16.
PK IT ENER				CHANNEL LEFT		SFC WERR
1 1 511. 2 1 564. 3 1 602.		5. 1173	3. 2.28	1022.44 1011 1128.68 1121 1205.83 1197	20 1.1198 17 4.6738 16 1.3028	E 01. 0.6

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:30:50 AM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q228A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9410.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TRB1

ACQUISITION DATE: 18DEC79 1929:32 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SE.C \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2	214.	6905.	0. 0024 0. 031.3 0. 0011	0. 0004	1. 2
• 1009: 10. 1018: 27. 1027: 31.	51.			<b>110</b> . 85.	. 27. . 82. . 12.	52.
1117: 21. 1126: 549. 1135: 8.		14. 21. 28. 1397. 5. 7.	1,9. 1191. 6.		. 91.	227. 14. 7.
• 1301: 7. 1310: 4. 1319: 2.	8. 4.	4. 2. 6. 3. 5. 6. JP CORRECTE	2. 8.	8. 8.		7. 0. 4.
PK IT EMER	GY AREA	BKGND	FИНМ С	HANNEL LEFT	PW CTS/SE	EC ZERR
<ul> <li>1 1 511.</li> <li>2 1 564.</li> <li>3 1 602</li> </ul>	19 6905.		2.29 1	022.60 1014 128.70 1119 205 79 1199	28 1 058E 19 1 151E	01. 1.2

192. 2. 73 1.205.39 1.199 22 3.205E-01.11.6

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0228B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9208.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

:4:

ACQUISITION DATE: 18DEC79 1939:47 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	31.0. 672. 95.	6557.	0. 0022 0. 0305 0. 001.3	0. 0001. 0. 0004 NOT DET	1. 4
• 1009: 18. 1018: 24. 1027: 30.	46.	77. 1	10. 15. 01. 98. 14. 14.			48.
	971	1331. 12	240. 1110.	35. 3 709. 34 6.	ł7. 8 <b>1</b> .	210. 20. 9.
• 1301: 12. 1310: 8. 1319: 5.	6. 8.	7. 4.	12. 6. 7. 9.	6.	8. 6. 8. 14. 8. 5.	4. 7. 3.
PK IT ENER				CHANNEL LEFT		SEC %ERR
<ul><li>1 1 510.</li><li>2 1 564.</li><li>3 1 602.</li></ul>		i7. 67	l.0. 2.86 <sup>7</sup> 2. 2.31 77 2.48	1022, 29 1011 1128, 69 1118 1205 37 1197	8 48 1. 093	

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:33:00 AM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q228C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8913. 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 1950:01 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL 1-8 \* LIBRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 99 OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

• ELEMENT	PEAK ENERGY	BKGN	D	AREA	CONCENT		SIGMA ERROR	%ERR(	OR 
X-COPPER ▼-ANTIMON X-ARSENIC	51.1. 1 7 564. 2 657. 4	29	Ø.	551. 6412. 0. <	0. 0022 0. 0308 0. 0014	Ę	9. 0001 3. 0004 401 DETI	6. 1. ECTABLE	3
• 1009: : 1018: : 1027: :	· · · · · · · · ·	15. 69. 19.	19. 73. 7.	21. 93. 10.	12. 87. 12.	16. 73. 15.	29. 64. 17.	28. 59. 1.1.	
<b>_ 1126:</b> 5:	20. 15. 22. 987. L1 5.	15. 1197. 1.0.	25. 1280. 13.	23. 1088. 7.	32. 651. 7.	45. 328. 11.	83. 94. 7.	204. 22. 12.	
• 1301: • 1310: 1319:	8. 8. 6. 10. 6. 3. PULSE-PI	7. 5. 6. LE-UP CO	8. 13. 5. RRECTE	4. 9. 6. D DATA.	2. 7. 6. CORRECTI	12. 2.	8. 5. 12. L. 000	13. 7. 6.	,
PK IT E	NERGY A	IREA B	KGND	F'ЫНМ	CHANNEL L	EFT PW	CTS/:	SEC %	ERR
2 1 5	54. 17 <i>6</i>	551. 412.	325. 290.		1022. 53 1 1128. 67 1		9. 180 3. 1. 069		. 3

603, 12 227. 216. 2. 35 1206.50 1197 32 3.783E-01 11.3

91119065 RF LEAD-THIRD | READIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0229A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5291.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THEA

:**†**:

ACQUISITION DATE: 18DEC79 2000:16 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 600. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

STORT TO THE TOTAL OF THE TOTAL

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	ARE'A	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 1 564. 2 657. 4	750. 2027. 126.	487. 15757. 0. <	0. 0033 0. 1279 : 0. 0027	0. 0003 0. 0012 NOT DETE	9. 2 Ø. 9 CCTABLE
• 1009: 31. 1018: 41. 1027: 50.	34. 59. 35.	75. 7	:7. 27. '9. 109. '9. 33.	19. 21 109. 93 22. 1.8	69.	32. 68. 27.
1117: 52. 1126: 1288. 1135: 24.	65. 2313. 3 10.	993. <mark>31.</mark> 3	5. 58. 9. 2688. 7. 12.	68. 81 1719. 853 5. 14	: 233.	518. 43. 11.
• 1301: 11. 13100: 14. 1319) 8.	14. 7. 10. ULSE-PILE-	11. 1 5. 1	9. 7. .6. 10. .6. 13.	10. 10 9. 8 6. 12 CORRECTION =	). 12. ! 11.	3. 13. 10.
PK IT ENER				CHANNEL LEFT		SEC XERR
1 1 511. 2 1 564. 3 1 602.	19 15757	. 2027	'. 2.32	1022.68 1011 1128.71 1121 1206.04 1196	25 8.1186 51 2.6266 30 8.4246	E 01 0.9

\*\*\*\*\*\*\* 9:35:06 RM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02298

TYPE OF SAMPLE: UMKNOWN

SAMPLE QUANTITY: 4597, 999 UMITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 2010:30 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2		409. 3195. 0. <	ø. <u>1</u> 259	0. 0003 0. 0012 NOT DETI	8. 7 1. 0 ECTABLE
• 1009: 1.9. 1018: 36. 1027: 33.	49.	18. 26. 53. 55. 22. 28.	3 <u>1</u> . 74. 17.	70. 7	5. 30. 5. 81. 0. 32.	31. 47. 21.
1117: 53. 1126: 1085. 1135: 12.	<b>1</b> 998. 25	47. 54. 82. 2572. 14. 19.	51. 2172. 15.	1428. 71	6. 130. 1. 170. 3. 17.	41.3. 41. 12.
1319: 14.	6.	11. 7.	1.5. 8.	9. 13. 1	2. 11.	15. 13. 7.
PK IT ENER	RGY AREA	BKGND	FИНМ	CHANNEL LEFT	PW CTS/	SEC ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li><li>3 1 602.</li></ul>	17 13195.	428. 1536. 260.	2. 34	1023. 44 1015 1128. 67 1119 1206. 12 1197	48 2. 199	E 01 1.0

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0229C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8475.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 18DEC79 2020:45 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREH	CONCENTR.	1. SIGMA ERROR	%ERROR
YMOMITMA-X	511. 2 564. 2 657. 4	1067. 3	25351	0. 0029 0. 1289 0. 0019	0. 0009	0. 7
• 1009: 45. 1018: 53. 1027: 58.	75.	44. 33. 100. 117. 39. 42.	118.	30. 38 129. 128 34. 25	. 90.	88.
1117: 71. 1126: 2076. 1135: 23.	3767. 4	1.03. 94. 866. 51.20. 24. 1.6.	4309.	104. 134 2654. 1243 16. 16	. 400.	828. 58. 4.
● 1310: 12. 1319: 11.	16.	13. 10. 9. 15.	1.4. 9.	10. 13 9. 13	. 8.	
PK IT ENER				CORRECTION =		EC ZERR
9 1 1 511. 2 1 564. 3 1 602.		. 1067.		1022.75 1011 1128.69 1120 1205 98 1200	22 1. 100E 18 4. 225E 14 1 079E	01 0.7

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0230A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10140.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

:4:

ACQUISITION DRTE: 18DEC79 2031:03 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

240

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DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT	. 1 SI R. ERF		Œ
X-COPPER X-ANTIMONY X-ARSENIC	511. 1 564. 2 657. 4	582. 1229. 145.	691. 26602. 0.	0.0025 0.1133 < 0.0015	0. 0	1992 6. 1997 9. T DETECTABLE	
● 1009: 39. 1018: 68. 1027: 64.	81.	44. 98. 34.	41. 40 411. 927 31. 36	7. 1.23.	53. 120. 1 39.	43. 42. 105. 60. 42. 35.	
1117: 85. 1126: 2225. 1135: 23.	102. 3976. 11.	109. 5184. 5. 17.	98. 108 372. 4369 9. 14	). 2778. ·		296. 1844. 378. 63. 10. 12.	
• 1301: 7. • 1310: 11. 1319: 13.	17. 11.	13. 9.	8. 1.6 9. 9 14. 14 ECTED DATA	). 16. !. 8.	9. 12.	9. 8. 13. 7. 11. 7.	
PK IT EMER				CHANNEL L			ERR
<ul> <li>1 1 511.</li> <li>2 1 564.</li> <li>3 1 602.</li> </ul>	17 2660	2. 12	82. 3.52 29. 2.30 77. 2.06	1022, 52 1 1128, 67 1 1205, 98 1	120 21 4	L. 151E 00 6. 4. 434E 01 0. L. 187E 00 5.	6

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:38:16 AM \*\*\*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DFC79 1020:00 SAMPLE IDENTIFICATION: 05308

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7129,000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 18DEC79 2041:22 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.		SIGMA RROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC		563. 741. 110.	378. 18006. 0. <	0. 1092		.0002 .0009 OT DETEC	10. 3 0. 8 TABLE
• 1009: 33. 1018: 51. 1027: 42.	58.	22. 31 70. 76 35. 30	. 96.	32. 71. 28.	21. 70. 26.	36. 50. 25.	35. 59. 23.
1117: 60. 1126: 1431. 1135: 17.	69. 2688. 35 1.2.	60. 83 146. 3534 1.8. 9	. 3025.		103. 852. 11.	193. 261. 9.	574. 55. 1.2.
● 1301: 8. 1310: 3. 1319: 7.	10.	5. 6 8. 11 7. 3	. 11. . 11.	· 8. 8.	9. 11. 6.	9, 8, 6, 000	9. 11. 4.
PK XT ENER		BKGMD	<u> </u>	CHANNEL LE		CTS/SE	EC ZERR
<ul><li>1 1. 510.</li><li>2 1. 564.</li><li>3 1. 602.</li></ul>	18 18006.	563. 741. 1.60.	3. 35 2. 30 2. 34	1022, 28 10: 1128, 68 11: 1206, 02 11:	19 19		01.   0. 8

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:39:21 AM \*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q230C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 3512.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 2051:36 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 4	360. 419. 83.	242. 8708. Ø. <	0. 0026 0. 1074 0. 0034	0. 0003 0. 0012 NOT DETE	1.2. 8 1. 1. CTABLE
<ul> <li>1009: 26</li> <li>1018: 24</li> <li>1027: 36</li> </ul>	k. 37.	36. 5	3. 23. 1. 57. 8. 16.	49. 39	47.	19. 29. 15.
1117: 29 1126: 751 1135: 18	1276.	1755. <b>1</b> 73	9. 37. 8. 1429. 7. 10.		9. 98. 3. 1.23. 4.	285. 26. 10.
• 1310: 2 1319: 5	5. 4. 2. 5. 5. 5. PULSE-P1LE	5. 6.	3. 7. 7. 3. 9. 5. TED DATA.	11. 10 4. 8	). 12. ). 6.	7. 5. 1.2.
PK IT ENE	RGY BRE	A BKGND	FШНМ	CHANNEL LEFT	PW CTS/9	SEC ZERR
2 1. 564	. 08 24   16 870	8. 419	. 2.29	1022.57 1013 1128.65 1121	18 4.029E 18 1.451E	

PK.	1. 1	EME.KUT	HKEH	BKGND	FMHM	CHRIMNEL LEFT	РИ	CTS/SEC	ZERR
	*	511.08	242.			1022. 57 1.01.3			
		564. 16	8708.	419.	2. 29	1128.65 1121	18	1.451E 01	1. 1
3	1	602. 89	276.	68.	2. 58	1206.04 1197	16	4. 595E-01	7. 4

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0231A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8593.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABA

:4:

ACQUISITION DATE: 18DEC79 2101:51 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT		PEAK NERGY 		D F		CONCER		L SIGMA ERROR	ZER:	ROR
%-COPFER ●%-ANTIMO %-ARSENI	NY :	564. 2	1.20	8. 26	656. 740. 0. <	0.435	51	0.0002 0.0009 NOT DETE	I	0.7
1018:			43. 113. 34.	101.	32. 131. 30.	56. 112. 43.		89.	52. 82. 30.	
1117: 1126: 2: 1135:		107. 3982. : 17.	99. 5248. 16.	101. 5284. 15.	115. 4337. 8.	123. 2950. 14.	137. 1335. 16.	281. 406. 1.9.	848. 78. 14.	
	8.		5. 10.	17. 5.	13. 7.		8. 9.	11. 10. 10. 1. 000	6. 9. 11.	
PK XT	ENERGY	ARE	9 B	KGND	FЫНМ	CHANNEL	LEFT PI	4 CTS/S	EC	%ERR
2 1	510. 96 564. 18 602. 83		Э.	685. 1208. 212.	2. 32	1022. 34 1128. 68 1205. 94	1120	20 1.093E 21 4.457E 18 1.255E	01	6. 9 0. 6 4. 6

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02318

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10892.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**†**:

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ACQUISITION DATE: 18DEC79 2112:09 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\_\_\_\_\_

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RAT10: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		TGMA :ROR	XERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	1249.	787. \$2024. 0. <	0. 0028 0. 1279 0. 0015	0.	0002 0008 )T DETEC:	Ø. 6
• 1009: 59. 1018: 57. 1027: 73.	86. 1	32. 46. 20. 148. 57. 43.	154.	465.	46. 1.23. 41	114.	57. 87. 48.
1117: 98. 1126: 2637. 1135: 25.	116. 1 4796. 63 17.		5332.		154. L545. 18.		001. 67. 11.
● 1301: 7. ● 1310: 10. 1319: 11.	7.	<ul><li>13. 18.</li><li>6. 6.</li></ul>	1.3. 7.	9.	11. 11.		1.0. 10. 9.
PK IT ENER		BKGND		CHANNEL LE		CTS/SE	C XERR
1 1 510. 2 1 564. 3 1 602.	1.7 32024.		2. 30	1.022. 38 10 11.28. 67 1: 1205. 94 1:	L20 19	5. 337E I	00 5.8 01 0.6 00 4.4

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02310

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7681.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

\*

ACQUISITION DATE: 18DEC79 2122:28 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

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DETECTOR: GEL1-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

ELEMENT	PEAK ENERGY	BKGND I	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY Z-ARSENIC	564. 2	846. 2:	2728.		Ø. 0009	
• 1009: 19. 1018: 50. 1027: 56.	58.	21. 31. 79. 104. 38. 28.				39. 64. 24.
1117: 68. 1126: 1832. 1135: 14.			79. 3808. 9.		1.21. 305.	745. 65. 9.
1301: 10. 1310: 12. 1319: 4.	8.	7. 7. 6. 3.	1.1. 4.	10. 8.	5. 9. 18. 9. 6. 7. V = 1.000	6. 12. 12.
PK IT ENER	GY AREA	BKGMD	ғынм і	CHANNEL LEI	T PW CTS/	SEC ZERR
1 1 511. 2 1 564. 3 1 602.	1.8 22728.	635. 846. 203.	2.30	1022.60 10: 1128.69 11: 1205.82 11:	19 19 3. 788	E 01 0.7

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:43:41 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0232H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8435, 000 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 2132:46 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* FNERGY TOLERANCE: 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEF ENER		VD O	AREA	CONCEN	****	SIGMA FRROR	%ERF	:OR
%-COPPER ●%-ANTIMON %-ARSENIC	IY 564	1.2 2:	28.	440. 5711. 0. <	0.002 0.025 0.001	6 (	0.0001 0.0004 NOT DETE		L. 4
• 1009: 1018: 1027:	28. 4				6. 60. 14.		49.		
1117: 1126: 4 1135:		?1. 1.184.	16. 1106. 8.	1.9. 921. 8.		25. 272. 10.	58. 93. 5.	163. 26. 4.	
1301: 1310: 1319:	6. 3.	6. 3.	4. 4.	8. 7.	6.	1. 7.	5. 4.	6. 3. 5.	
PK IT E	MERGY	FIREA I	BKGND	FWHM	CHANNEL	LEFT PW	CTS/S	EC ;	KERR
2 1 5	i64. 19	440. 5711. 200.	198. 228. 94.	3. 46 2. 29 3. 11		1014 1: 1120 1: 1199 1:	9 9. <b>5</b> 18E	99 3	5. 6 1 4 9. 9

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0232B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9165.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 2143:01 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 600. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMON %-ARSENIC			6068.	0.0016 0.0289 0.0011	0. 0004	1. 4
		12. 49. 6 19. 1		<b>6</b> 8. 7		20. 38. 17.
1126: 4	17. 15. 91. 938. 6. 7.	24. 1 1120. 120 3.	18. 21. 35. 1.067. 7. 3.	603. 31	8. 67. 5. 78. 7. 3.	199. 16. 5.
1301: 1310: 1319:	1. 1. 7. 6.	3. 4. 3. LE-UP CORREC	6. 3. 0. 9.	5. 2.	9. 2. 4. 7. 5. 1. = 1.000	7. 5. 5.
PK IT E	NERGY A	REA BKGNI	Э БИНМ	CHANNEL LEFT	PW CTS/	SEC ZERR
2 1 5		377. 294 068. 406 185. 100	5. 2.32	1022.71.1014 1128.69 1120 1206.02 1199	29 1.011	E 01. 1.4

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0232C

'SHMPLE IDENTIFICATION: 0232C TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9432,000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:#:

ACQUISITION DATE: 18DEC79 2153:15 \* FWHM(1332) 2.390
PRESET TIME(L1VF): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

•

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0. 5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

5-jK

ELEMENT	PEAK ENERGY	BKGND	HREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1. 564. 2 657. 4		417. 6624. 0. <	0. 0018 0. 0308 0. 0012	0. 0004	1. 3
• 1909: 12. 1018: 38. 1027: 32.	5. 49. 29.		9. 23. 5. 72. 6. 10.	94. 7	.9. 21. '3. 61. .8. 19.	21. 41. 10.
1117: 20. 1126: 512. 1135: 3.		.203. 132	4. 20. 2. 1072. 8. 4.	754. 33	2. 87. 5. 79. 6. 9.	181. 32. 7.
1301: 3. 1310: 4. 1319: 5.	6. 5.	5. 6.	3. 2. 4. 8. 5. 1. TED DATA.	3.	3. 4. 5. 5. 1. 7. = 1.000	5. 5. 7.
PK IT ENER	GY AREA	R EKGND	FЫНМ	CHANNEL LEFT	PW CTSZ	SEC XERR
<ul><li>1 1. 511.</li><li>2 1. 564.</li><li>3 1. 602.</li></ul>	20 6624	l. 235	. 2.36	1022.58 1014 1128.72 1118 1205.67 1198	3 20 1.104	E 01 1.3

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0233A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12320.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE MAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 2203:30 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

:1.

1.

564.19

602.74

81.65.

254.

•	ELEMENT		PEAK ENERGY	BKG!	NE)	AREA	CONCE		L SIGMA ERROR	%E.F	ROR
•	Z-COPPER Z-ANTIMO Z-ARSENI	P'MC	511. 0 564. 2 657. 4	2.	95. 53. 58.	686. 8165. 0. <	0.001 0.021 9.16188	91.	0.0001 0.0003 NOT DETI		5. 3 1. 1 .E
•	1009: 1018: 1027:	19. 38. 31.	1.2. 54. 35.	13. 82. 17.	10. 109. 9.	18. 120. 11.	21. 113. 19.	17. 98. 12.	18. 85. 1.6.	27. 49. 10.	
•	1117: 1126: 1135:	1.5. 630. 1.1.	13. 1172. 5.	27. 1614. 12.	23. 1.655. 3.	32. 1351. 10.	44. 839. 5.	24. 441. 11.	89. 118. 9.	281 23. 6.	
•	1301: 1310: 1319:	9. 5. 9. PL	7. 6. 6. NLSE-PIL	4. 6. 4. E-UF' C	11. 4. 6. ORRECTE	4. 5. 4. D DATA.	7. 3. 3. CORREC:	8. 6. 2. TION =	5. 5. 5. 1. 000	7. 2. 6.	
•	PK IT	ENERG			BKGND	FWHM	CHANNEL		4 CTSZ	SEC	%ERR
•	1 1	511. 0	10 G	86.	305.	3. Ø3	1.022. 41.	1011 :	23	E 00	5. 2

2. 29

2.41

1128.70 1118

1205.76 1196

23 1.361E 01.

25 4.240E-01

1. 1.

253.

169.

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02338

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6626.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 2213:44 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NEW ITERATIONS: 10.

:1

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KY

KEY/CHNL: 0.5003803 \* HALF LIFF RATIO: 8 00

KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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ELEMENT	PEAK ENERGY	BKGND (	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER 2-ANTIMONY Z-ARSENIC	564. 2	105.	4506.	0. 0025 0. 0299 0. 0016		7. 2 1. 5 CTABLE
1009: 4. 1018: 23. 1027: 24.	40.		14. 67. 8.			21. 36. 7.
1117: 5. 1126: 342 1135: 3	684. 8		20. 724. 4.	463. 234		1.40. 14. 3.
• 1310: 3. 1319: 3.	5.	5. 7. 6. 3. 6. 1. JP CORRECTE	9. 1.	7.	5. 4. 5. 6. 4. 4. = 1.000	3. 4. 2.
PK IT EME	RGY AREA	BKGND	FWНМ С	HANNEL LEFT	PW CTS/S	SEC %ERR
1 1 511 2 1 564 3 1 602	18 4506.	233. 1.05. 1.01 .	2. 28 1	.022. 89 1013 .128. 68 1118 .206. 15 1198	19 6.830E 21 7.509E 27 2.773E	· · ·

91119065 RF LEAD-THIRD IRRADIATION

| SAMPLE DATE: 18DEC79 1020:00 | SAMPLE IDENTIFICATION: 0233C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9634.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 18DEC79 2223:59 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

ELEMENT	PEAK ENERGY	PKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER •X-ANTIMONY X-ARSENIC	564. 2	237.	512. 6559. 0.		0. 00 <u>0</u> 4	1. 3
• 1009: 1 1018: 2 1027: 3	6. 42.	14. 58. 20.	75. 83.	98.		32.
1117: 1 1126: 51 1135:	3. 1004.	15. 1270. 1: 9.	18. 24. 274. 1116. 3. 10.			220. 20. 6.
	4. 3.	3.		. 7. . 2.	6. 3. 7. 9. 5. 6. 1 = 1.000	3. 4. 8.
PK IT EN	ERGY AR	EA BKGI	ND FWHM	CHONNEL LEF	T PW CTS/	SEC ZERR
2 :1. 56	1. 17 5 4. 17 65 2. 73 1	59. 2	19. 2.95 37. 2.30 21. 2.44	1022.74 101 1128.66 111 1205.73 119	.8 22 1.093	

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0234A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8570.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

:4:

ACQUISITION DATE: 18DEC79 2234:13 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

: |-

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	767. 940. 110.	475. 20255. 0. <		0. 0002 0. 0008 NOT DETE	0. 7
• 1009: 44. 1018: 40. 1027: 43.	62.	83. 9	84. 28. 94. 91. 80. 34.	90. 84	. 29. . 77. . 29.	44. 51. 29.
1117: 50. 1126: 1715. 1135: 13.			72. 74. 95. 3316. 9. 7.	2126. 991	. 303.	734. 48. 8.
1301: 8. 1310: 6. 1319: 5.	3. 5.	8. : 5.	l2. 13. 6. 8.		. 11. . 9.	9. 8. 7.
PK 1T EMER				CHANNEL LEFT		EC ZERR
	89 475 17 20255 74 616	. 949	3. 2.30	1022.18 1013 1128.66 1120 1205 25 1194		01. 0.7

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:51:12 FM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0234B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5308.000 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THEIL

ACQUISITION DATE: 18DFC79 2244:28 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: KEY/CHNL: 0.5003803

-0.5932283 KFV

1. 750KV \* HELF LIFE RATIO: 8. 99 \* ABUNDANCE LIMIT: 85. 00%

UMKNOWN SAMPLE REPORT

OFFSET:

• ELEMENT	PEAK EMERGY	BKGND	AREA	CONCE		SIGMA ERROR	ZERROR
2-COPPER •%-ANTIMON %-ARSENIC	511. 2 7 564. 2 657. 4	438. 598. 81.	272 12461 0	. 0.10	38 (	3. 0003 3. 0010 NOT DETE	12.5 Ø.9 CTABLE
1018:	18. 18. 33. 32. 25. 27.	30. 37. 25.	50.	11. 28. 59. 57. 22. 17.	19. 50. 16.	14. 43. 1.4.	13. 42. 17.
<u> </u>	35. 54. 75. 1858. 11 7.	41. 2405. 2 11.	55. 2534. 20 6.	40. 60. 62. 1.373. 8. 6.	68. 604. 4.	128. 150. 5.	407. 25. 15.
1301: 1310: 1319:	3. 4. 10. 6. 7. 2. PULSE-PIL	5. 7. 8. .E-UP CORF	5. 5. 2. RECTED DA	5. 3. 9. 8. 4. 6. TA. CORREC	4. 8. 6. TJON = 1	5. 4. 2. 1. 000	4. 3. 4.
PK IT E		KEA BKO			LEFT FW		EC ZERR
2 1. 5	54.19 124	<b>161</b> 5	138. 3.2 598. 2.2 190. 2.1	9 1.128. 70	1119 2	3 2.077E	01. 0.9

\*\*\*\*\*\*\*\* 9:52:18 AM \*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02340

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 3665, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 18DEC79 2254:41 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHOPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 19.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 09%

ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCENTR		GIGMA ROR %	ERROR
X-COPPER •X-ANTIMONY X-ARSENIC	564. 2		8915.	0. 0025 0. 1077 C 0. 0032	Ø.	0003 0012 )T DETECTF	1 1
• 1009: 2 1018: 2 1027: 2	5. 25.	10. 37. 13.	47. 48		14. 48. 13.	35. 2	:5. :8. .8.
1117: 3 1126: 71 1135:		37. 1749. 1 8.		. 978.	44. 398. 5.	112.	
<b>1310</b> :	6. 5. 3. 4.	3. 5.	3. 7 5. 4	. 3. . 8. . 5. . CORRECTIO	4. 8.	5. 6.	9. 9. 4.
PK IT EN		ŒA BKG		CHANNEL LE		CTS/SEC	%ERR
2 1 56	.1. 01 2 4. 1.8 89 12. 89 2	)15.     4	36. 3.02 05. 2.29 65. 2.30	1022. 43 10 1128. 69 11 1206. 06 11	L20 18	3. 633F-01 1. 486E 01 4. 395E-01	. 1 1

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0235A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8812.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

\*

ACQUISITION DATE: 18DEC79 2304:55 \* FWHM(1332) 2.390
PRESET TIME(11VE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

:40

ELEMENT		PEAK VERGY	BKGND	) F	KEA	CONCE		1 SIGMA ERROR	ZERR:	OR 
X-COPPER X-ANTIMO X-ARSENIO	M'+' :	510. 9 564. 2 557. 4	533 1424 1.24	t. 23	552. :424. 0. <	0. 00: 0. 117 0. 001	<b>7</b> 9	0.0002 0.0008 NOT DETE	9.	. 3 . 7
1009: 1018: 1027:	33. 48. 54.	38. 69. 42.	26. 79. 40.	23. 106. 25.	32. 99. 38.	29. 92. 34.	38. 100. 32.	40. 73. 25.	37. 66. 31.	
1117: 1126: 1: 1135:	79. 882. : 1.6.	83. 3505. 6.	101. 4523. 11.	94. 4822. 4.	88. 391.3. 9.	83. 2553. 1.5.	129. 1155. 13.	244. 311. 6.	754. 52. 9.	,
1301: 1310: 1319:	11. 12.	8. 7. 1.0. 5E-PILE	5.	6. 9. 7. RRFCTEC	5.	1.5. 6.	9. 6.	10.	6. 8. 8.	
PK IT	ENERGY	FIRE	A 8k	KGND	FWHM	CHANNEL	LEFT P		SEC %	ERR
2 1	510. 94 564. 19 602. 80	2342	4. :	532. L424. 217.	3. 44 2. 29 2. 66	1022. 28 1128. 70 1205. 88	1120	19 9.199E 26 3.904E 17 1.196E	: 01 0	.3 .7 .7

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02358

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5545.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 2315:14 \* FWHM(1332) 2.390
PRESFT TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 602. SFC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HFLF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE | 1MIT: 85.00%

:4:

ELEMENT	PEAK ENERGY			CONCENTR.	1. SIGMA ERROR	%ERROR
_	511. 1 564. 2	440. 910.	293. 14570.	0. 0023 0. 1168 0. 0023	0. 001.0	Ø. 9
• 1009: 22. 1018: 30. 1027: 36.	33.	49. E	6. 24. 5. 54. 7. 19.	79. 54	. 23. 48. 18.	38.
1117: 57. 1126: 1163. 1135: 7.	2230. 2	58. 5 850. 293 8.	:0. 2430.	68. 78 1555. 723 5. 7	197.	
• 1301: 1. 1310: 5. 1319: 4.	81.	4.	5. 4.		ł. 4.	
PK IT ENER				CHRNNEL LEFT		SEC %ERR
	12 293 17 14570 81 383	. 91.6		1022.66 1014 1128.67 1120 1205 89 1197	28 2.428E	E 01 0.9

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02350

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 6203.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 18DEC79 2325:29 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**\*** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* FNERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENY	PEAK FNERGY	BKGND I	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER •X-ANTIMONY X-ARSENIC			416. 5983. Ø. (	0. 0029 0. 1147 0. 0022	0.0003 0.0010 NOT DETE	8. 7 Ø. 8 CTABLE
• 1009: 23. 1018: 39. 1027: 30.	48.	20. 24. 55. 89. 30. 25.	24. 83. 24.	19. 27 74. 68 19. 21	3. <b>59</b> .	34. 52. 26.
1117: 44. 1126: 1320. 1135: 13.		61. 65. 38. 3259. 6. 11.	66. 2683. 6.	69. 81 1693. 751 6. 11	2. 203.	530. 39. 10.
1301: 5. 1310: 11. 1319: 10.		4. 7. 7. 10. 5. 1. F CORRECTE	4. 10. 6. D DATA.	6. 10	4. 7.	6. 7. 8.
PK IT EMER	:GY FIREA	BKGND	<b>Г</b> ШНМ (	CHANNEL LEFT	PW CTS/S	SEC MERR
<ul><li>1 1 510.</li><li>2 1 564.</li><li>3 1 602.</li></ul>	17 15983.	450. 740. 1.55.	2. 28	1.022. 31 1013 1128. 68 1121 1205. 77 1199	20 6.927E 20 2.664E 20 7.983E	E 01. 0.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 9:56:39 AM \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 P.F LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DFC79 1020:00 SAMPLE IDENTIFICATION: Q236A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11815.00 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 18DEC79 2335:43 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 1. 750KV KEY/CHNL:

0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

602.73

971.

306.

•	ELEMENT	T	PEAK ENERGY	BKG <del>l</del>	√D i	HREA	CONCE		1 SIGMA ERROR	XER	ROR
•	X-COPFE X-ANTIN X-ARSEN	10141	511. 1. 564. 2 657. 4	-	73. 3:	678. 1786. 0. <	0. 003 0. 1.20 0. 003	<b>3</b> 0	0.0002 0.0007 NOT DETE		6. 9 0. 6 E
•	1009: 1018: 1027:	47. 65. 69.	46. 77. 62.	40. 104. 52.	48. 136. 38.	54. 172. 40.		44. 131 48.		45. 90. 49.	
•	1117: 1126: 1135:	94. 2561 28.		132. 6235. 10.		123. 5291. 12.	3523.			933. 83. 18.	
•	1319:		9. 14. 7. ULSE-PI	10. 5. 10. LE-UP CI	1.8. 11.	10. 18. 4. D DATA.		14. 9.	13. 1.4.	10. 12. 6.	
•	PK IT	ENER	GY A	REA I	3KGMD	F ИНМ	CHANNEIL.	LEFT P	W CTS/	SEC	ZERR
•	1 1 2 1	511. 564.	08 19 31		740. 1573.	2. 57 2. 29	1022. 57 1128. 70		17 1. 1291 22 5. 2981		6. 9 0. 6

2. 35

1.205. 73 1197 24 1. 619E 00

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATF: 18DFC79 1020:00 SAMPLE IDENTIFICATION: Q236B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9961.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 2346:02 \* FWHM(1332) 2.390
PRESET TIME(L1VF): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NOR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* FNFRGY TOLFRANCE:

'DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2		25627.	0. 0025 0. 1150 0. 0015	Ø. ØØØ8	Ø. 7
• 1009: 43. 1018: 61. 1027: 47.	72.	30. 35. 79. 92. 34. 39.	100.	121. 10	:3. 36. 92. 90. 96. 28.	37. 71. 31.
1117: 83. 1126: 2127. 1135: 10	3843. 49	81. 104. 947. 5120. 8. 6.	4137.	2766. 122	92. 276. 97. 358. 92. 12.	806. 63. 7.
1301: 6, 1310: 10, 1319: 9,	11.	7. 6. 9. 12. 8. 7. JP CORRECTI	13. 8.	6. 9.	4. 3. 7. 5. 7. 3. = 1.000	10. 7. 8.
PK IT ENE	RGY AREA	BKGND	FWIM	CHANNEL LEFT		SEC ZERR
1 1 511. 2 1 564. 3 1 602.	1.7 25627.	1000.	2. 32	1022.77 1014 1128.66 1119 1205.89 1198	20 4. 271	E 01 0.6

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02360

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5924.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TAB1

:4:

ACQUISITION DATE: 18DEC79 2356:20 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

R: GELI-8 \* L:18RARY:NUCL.LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:40

ELEMENT	PEAK ENERGY	BKGND	ARE	::A	CONCEM		. SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 1 564. 2 657. 4	593. 608. 88.	2; 153;	71. 50. 0. <	0. 002 0. 116 0. 002	0	0.0003 0.0010 NOT DETE	14. 1 0. 9 CTABLE
1009: 27 1018: 29 1027: 30	41.	33. 56. 21.	25. 56. 18.	19. 67. 20.	28. 74. 20.	24. 74. 24.	24. 47. 20.	27. 37. 31.
1117: 41 1126: 1306 1135: 8	, 2227.	50. 2989. 2 13.	59. 990. : 12.	54. 2554. 8.	69. 1625. 13.	82. 781. 6.	188. 224. 1.0.	499. 49. 9.
<b>)</b> 1310:     6 1319:     6	7. 7. 5. 5. 1. 8. PULSE-PILI	1.1. 6. 3. E-UP CORR	6. 5. 6. ECTED 1	4. 7. 5. ЭЯТА.	8. 1.0. 5. CORRECT	5. 19. 6. TON =	8. 7. 5. 1. 000	5. 8. 5.
PK IT ENE	RGY ARI	EA BKG	ND FI	AHM C	HANNEL	LEFT PA	l C75/5	EC ZERR
2 1 564	l. 18 153:	50. 6	<b>0</b> 8. 2.	34 1		1.11.9 1	21 4.517E .9 2.558E 34 7.299E	01 0.8

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0239A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8751.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

: 1:

ACQUISITION DATE: 19DEC79 6:34 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 616. SEC \* SHRPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

\*\*\*\*

DETECTOR: GEL.I-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

•	ELEMENT	r 	PEAK ENERGY	BKGI	ND I	AREA	CONCE	4TR.	1 SIGMA ERROR	%ERR(	JR 
•	%-COPPE %-ANTII %-ARSE	40NY	511. 0 564. 2 657. 4	48 44: 41	22. 11	5420. 4520. 0. <	9. 986 9. 587 9. 993	70	0. 0009 0. 0020 NOT DET	0.	. 2
•	1009: 1018: 1027:	179. 732. 702.	175. 1102. 415.	162. 1629. 290.	186. 2215. 188.	192. 241.4. 146.		270. 2126. 150.	1727.	431. 1.088. 156.	
•	1117: 1126: 1135:	308. 9389. 97.	406. 16946. 77.	388. 22530. 64.	41.2. 22831. 73.	413. 19193. 58.	409. 12084. 53.	615. 5552. 66.	1193. 1594. 42.	3688. 3 <b>1</b> 9. 69.	
•	1301: 1310: 1319:	30. 19. 30.	37. 28.	24. 28. 27.	21. 40. 25.	32. 39. 24.	35. 25.	27. 23. 22.	45. 22.	26. 24. 38.	
•	PK IT		'ULSE-P11 'GY 81		OKKEUTE. BKGND	р онтн. Бинм	CHANNEL CORRECT			SEC X	ERR
•	1 1 2 1 3 1 4 1	511. 564. 602. 646.	17 114: 80 3:	362.	4872. 4422. 754. 545.	3. 15 2. 29 2. 35 2. 60	1022, 51 1128, 68 1205, 86 1292, 38	1120	32 2.570 19 1.909 22 5.603 20 4.904	E 02 0. E 00 2.	.0 .3 .1

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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02398

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8429, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 17:05 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.099 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1. 750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO:

8. 99 OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

5

1.

645. 93

225.

367.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		SIGMA RROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	751.	1.4045. 108320. 0	0. 5775	; 0	. 0020	Ø. 3
1018: 680.				2314.	1991.	1569.	450. 995. 136.
1117: 295. 1126: 8741. 1135: 94.				1.1.302.		1480.	408. 288. 40.
● 1310: 24. 1319: 15.	27. 30.	29. 17.	29. 23. 27. 38. 26. 22. ECTED DATA.	44. 20.	40. 22.	32.	27. 36. 15.
PK IT ENER				CHANNEL L			C %ERR
<ul> <li>1 1 511.</li> <li>2 6 559.</li> <li>3 6 564.</li> <li>4 1 602.</li> </ul>	75 133 16 10833	37. 5: 20. 7:	92. 1.50 51. 2.30	1022, 53 1 1119, 83 1 1128, 65 1 1205, 92 1	111 27 111 27	' 1. 805E	01 1.0 00 3.8 02 0.3 00 2.0

2. 03

1292.07 1286 13 3.755E-01 13.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 10:02:09 AM \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 0239C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8501.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 27:31 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5.000 PELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

1. 750KV \* HALF LIFE RATIO: 8. 99

KEY/CHNL: 0.5003803

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT:

85. 99%

1292.08 1284 17 4.978E-01 11.6

UNKNOWN SAMPLE REPORT

1.

645, 94

299.

455.

● ELEMENT	PEAK ENERGY	BKGMD	F	REA	CONCE		1 SIGMA ERROR	ZER	ROR
X-COPPER X-ANTIMONY X-ARSENIC		4430 713 424	. 111	5106. .237. 0. <	Ø. 589		0.0010 0.0020 NOT DETE		1. 2 0. 3 E
• 1009: 153. 1018: 723. 1027: 768.	159. 1122. 407.			170. 2349. 179.		249. 2098. 162.	329. 1597. 1.45.	462. 1128. 143.	
1117: 343. 1126: 8986. 1135: 107.	409. 16363. 65.	394. 21381. 2 76.	395. 1861. 56.	375. 18366. 49.	392. 11813. 52.	564. 51.97. 48.	1144. 1457. 53.	3625. 306. 47.	
1301: 27. 1310: 20. 1319: 35.	40.	` 33. 32. 31. E-UP COR	25. 28.	24. 56. 22. DRTA.		18. 30. 25.	36. 23.	20. 36. 23.	
PK IT ENER			GND		CHANNEL			SEC	XERR
<ul> <li>1 1 511.</li> <li>2 4 559.</li> <li>3 4 564.</li> <li>4 1 602.</li> </ul>	47 1.9 17 11.12	96. 1 37.	430. 293. 713. 641.		1.119, 28	1109 1109	29 2.518 30 3.327 30 1.854 19 5.238	E 00 E 02	1. 0 3. 4 0. 3 2. 1

2. 83

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DFC79 1020:00 SAMPLE IDENTIFICATION: 0240A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9207.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:†:

ACQUISITION DATE: 19DEC79 38:01 \* FWHM(1332)2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSFD REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL.. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HRLF L1FE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
	511. 3 564. 2 657. 4		278. 1.01.51. 0. <	0.0014 0.0497 0.0014		1. 0
• 1009: 16. 1018: 28. 1027: 18.	26.	12. 17 42. 45 20. 17	5. 55.	50. 50.	. 19. 39. 18.	40.
1117: 21 1126: 773 1135: 7	1482. 2	30. 30 036. 1989 5. 8	9. 1.688.	1126. 488.	134.	297. 34. 2.
• 1301: 4. 1310: 7. 1319: 4.	8. 4.	8. 5 6. 11 3. 6 UP CORRECT	l. 8. 5. 2.	4. 6.	. 1.	3. 10. 7.
PK IT ENE			FЫНМ	CHRINNEL LEFT		EC %ERR
<ul> <li>1 1 511.</li> <li>2 1 564.</li> <li>3 1 602.</li> </ul>	. 19 10151	. 392.		1022.99 1016 1128.71 1118 1205.62 1200	16 4.6255 27 1.6925 24 5 4635	01 1.0

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 02408

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10669.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

ACQUISITION DATE: 19DEC79 2.390 48:16 \* FWHM(1332) PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT		PEAK NERGY	BKGN	D f	AREA	CONCER		1 SIGMA ERROR	%ERR(	OR 
%-COPPER %-ANTIMO %-ARSENI	144'7'	511. 1 564. 2 657. 4	43	9. <u>1.</u> 2	2010.	0.001 0.050 0.001	<del>)</del> 9	0.0001 0.0005 NOI DETE	1.	. 0
1009: 1018: 1027:			21. 35. 22.	61.	16. 60. 1.8.	74.	23. 50. 13.	52.		
1117: 1126: 1135:	31. 983. 10.	36. 1756. 7.	36. 2319. 6.	39. 2429. 6.	35. 2056. 8.		67. 584. 5.	171.	365. 44. 5.	
1301: 1310: 1319:	5.	8. 6.	3.	8. 4.	1.3. 5.	5. 5. 4. CORRECT	4. 4.		6. 6. 6.	
PK IT	ENERGY			KGND		CHANNEL			SEC XI	ERR
2 1	511. 15 564. 15 602. 78		.ଖ.	403. 430. 186.		1.022. 70 1.1.28. 70 1.205. 83	1119	23 5.6658 20 2.0028 24 5.6868	E 01 0.	. Ø . 9 . 8

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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: Q240C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUENTITY: 10333, 00 UNITS: LIG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 58:30 \* FWHM(1332)2. 390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. L181 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEY/CHNL: 0.500380R

\* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

1. 750KV

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 2 564. 2 657. 4		306. 1365. 0. <	0. 0014 0. 0498 0. 0013	0.0001 0.0005 NOT DETE	1 0
• 1009: 16. 1018: 25. 1027: 36.	34.	22. 16. 43. 58. 21. 15.	9. 51. 22.	<b>61</b> . 58.		19. 37. 16.
1117: 35. 1126: 927. 1135: 15.	35. 1643. 22 9.	41 27. 40. 2257. 5. 9.	45. 1931. 8.		159.	346. 26. 7.
• 1301: 10. • 1310: 5. 1319: 2.	5. 2.	8. <i>6</i> . 8. 4.	6.			5. 10. 9.
PK IT ENER		BKGND		CHANNEL LEFT I		EC ZERR
1 1. 511. 2 1. 564. 3 1. 602.	19 11365.	333. 404. 1.40.	2. 29	1022.87 1012 1128.70 1120 1205.84 1198	18 5. 104E 19 1. 894E 17 5. 670E	01. 1.0

91119065 RF LEAD-THIRD TRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: S626A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9497.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

#:

ACQUISITION DATE: 19DEC79 108:45 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+

#### UNKNOWN SAMPLE REPORT

646. 91

262.

555.

ELEMENT -	PERK ENERGY	BKGN	D f	AREA	CONCE		1 SIGMA ERROR 	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. Ø 564. 2 657. 4	467 1.41 54	4. 1.49	5338. 9968. Ø. <	0. 716	75 54 35	0.0009 0.0021 NOT DET	1. 2 0. 3 ECTABLE
• 1009: 244. 1018: 682. 1027: 715.	227. 1122. 478.	204. 1753. 300.	252. 2178. 256.	231. 2417. 212.	277. 2472. 197.	307. 2193. 184.	1.633.	463. 1201. 189.
1117: 422. 1126:12289. 1135: 155.			551. 29503. 98.	495. 24704. 87.	565. 15765. 72.	786. 7059. 77.	1683. 2044. 1.01.	4810. 461. 74.
<b>1310</b> : 37. <b>1319</b> : 36.	44. 35. 35. 'ULSE-PIL	22.	32. 49. 18. IRRECTEI	29. 48. 30. DATA.	35. 55. 40. CORRECT	28. 56. 40. (ION =	33. 45. 21. 1. 000	42. 39. 27.
PK IT ENER	GY AR	EA E	KGND	<b>Г</b> ШНМ	CHANNEL.	LEFT F	W CTS/	SEC XERR
<ul> <li>1 1 511.</li> <li>2 9 559.</li> <li>3 9 564.</li> <li>4 1 602.</li> </ul>	67 19 17 1499	95. 68.	4675. 1040. 1414. 732.		1022, 50 1119, 67 1128, 66 1205, 91	1.113 1113	23 2.556 46 3.326 46 2.499 16 7.152	E 00 3.2 E 02 0.3
5 1 639.			504.	2. 90	1279. 33		12 3.170	

2. 90

1292. 22 1284

15 4. 371E-01. 14. 1.

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: S6268

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9747.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:#:

:1:

ACQUISITION DATE: 19DEC79 119:20 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED L1VE TIME: 600. SEC \* NBR 17ERATIONS: 10.

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90 Mayering among 1, 10 , 10 1

DETECTOR: GCL1-8 \* LIBRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

#### UNKNOWN SAMPLE REPORT

1.

646, 04

262.

562.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCE		SIGMA ERROR	ZERROR
Z-COPPER X-ANTIMONY Z-ARSENIC	511. Ø 564. 2 657. 4	4744. 1134. 568.	15183. 152944. Ø.	0. 71	29 1	0.0009 0.0021 NOT DETE	1. 2 0. 3 CTABLE
• 1009: 237. 1018: 761. 1027: 739.	240. 1136. 438.	1719. 2	238. 27 2161. 247 237. 21	8. 2478.	300. 2143. 182.	334. 1645. 195.	492. 1185. 167.
1117: 406. 1126:12651. 1135: 156.	483. 22797. 2 122.		517. 54 123. 2488 91. 10	0. 15911	806. 7023. 99.	1726. 2053. 69.	5129. 418. 76.
1301: 38. 1310: 36. 1319: 34.	56. 37. 37. ULSE-PILE	30.	58. 6 32. 4	8. 34.	24.	32. 40. 38. 1 000	43. 40. 31.
PK IT ENER					LEFT PW		EC %ERR
1 1 511. 2 5 559. 3 5 564. 4 1 602.	71 174 16 15294	19. 10 14. 11	'44. 3.11 )46. 1.69 .34. 2.32 )65. 2.33	1119. 75 1128. 64	1109 3 1109 3		00 3.5 02 0.3

2.46

1.292, 28 1.287

13 4.368E-01 14.2

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: S626C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10186.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

:4:

ACQUISITION DATE: 19DEC79 129:53 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 699. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4-

\*

#### UNKNOWN SAMPLE REPORT

657.54

197.

529.

1.

•	ELEMENT	***************************************	PEAK ENERG		GMD	AREA	CONCE	YTR.	1 SIGMA ERROR	ZER	ROR
•	%-COPPER %-ANTIMO %-ARSENI	]}\\'r'	511. 564. 657.	2 1		1.6885. 53508. 197.	0. 08: 0. 73: 0. 00:		0. 0009 0. 0021 0. 0011		1. 1. 0. 3 8. 1
•	1009: 1018: 1027:	229. 933. 828.	243 1263 503	. 1889	. 2476.	2750.		302. 2428. 185.	381. 1812. 200.	536. 1294. 212.	
•	1117: 1126:11 1135:	440. 3902. 1.52.	484 24334 1.18	. 31519	. 32015.	26666.	1.6951.	897. 7284. 96.	1783. 2133. 78.	5337. 464. 79.	,
•	1301: 1310: 1319:	43.	49 37 31 ULSE-F	. 52 . 29	. 45.	64. 46.	80. 43.	45. 65. 52. TION =	53. 38.	36. 50. 30.	
	PK IT	ENER	GY	RREA	BKGMD	FWHM	CHANNEL	LEFT F		'SEC	ZERR
•	1 1 2 10 3 10 4 1 5 1	511. 559. 564. 602. 645.	72 15 16 80	6885. 2199. 3508. 4755. 300.	5400. 893. 1199. 11.66. 546.	3. 10 1. 33 2. 32 2. 29 2. 74	1022. 47 1119. 77 1128. 63 1205. 88 1291. 95	1107 1107 1195	24 2.814 39 3.665 39 2.725 21 7.925 12 5.006	5E 00 5E 02 5E 00	1.0 2.9 0.2 1.8 2.4
	ور سر	"are larin sur."	p	2		Jan. 3m. 3m.				<b>_</b>	

2.50

1315.26 1307

14 3.278E-01 18.0

91119065 RF LEAD-THIRD TRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: 5604A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8210.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

+:

ACQUISITION DATE: 19DEC79 140:28 \* FWHM(1332)2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 644. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1

:4:

DETECTOR: GEL1-8 \* LIBRARY: MUCL, LJB1

\*

#### UNKNOWN SAMPLE REPORT

5

1

1

645.86

657.11

649.

2850.

1540.

1524.

ELEMENT	PEAK ENERGY	8KGND	AREA `	CONCEN		. SIGMA ERROR	%ERROR
X-COPPER •X-ANTIMONY X-ARSENIC	511. 3 564. 1. 657. 1	6803. 3517. 3 1524.	1180. 24814. 2850.		3	0. 0007 0. 0042 0. 0033	0. 2
• 1009: 446. 1018: 475. 1027: 501.	534.	526. 458 533. 559 427. 468	9. 618.	612.	442. 639. 432.	482. 588. 437.	482. 530. 439.
1117: 4485. 1126:28115. 1135: 479.	49058. 6 375.	5673. 4987 2891. 63434 334. 328	l. 51820.	32933.	2145. 14646. 300.	4016. 4387. 300.	11602. 1060. 269.
<ul><li>1310: 117.</li><li>1319: 137.</li></ul>	191. 118.	114. 118 391. 546 92. 86 UP CORRECT	5. 642. 5. 82.	590. 103.	98.		130. 192. 111.
PK XT ENER	RGY ARE	A BKGND	FUHM	CHANNEL	LEFT PW	l CTS/	'SEC: XERR
<ul> <li>1 1. 511.</li> <li>2 2. 559.</li> <li>3 2. 564.</li> <li>4 1. 602.</li> </ul>	19 2789 14 32481	5. 41.21. 4. 3517.	3. 20 2. 39 2. 34 2. 37	1.023. 05 1118. 72 1128. 60 1205. 80	1108 3 1108 3	.5 1.966 4 4.649 4 5.414 22 1.560	PE 01 0.7 HE 02 0.2

2, 49

2.42

1291.93 1285

1314.42 1307

14 1.082E 00

1.6 4.751E 00

2.7

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: S604B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9534.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:k

ACQUISITION DATE: 19DEC79 151:26 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 653. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 1.750KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

657.13

3073.

2380.

•	ELEMEN	<u>۱</u> ۲	• •••• •••• ••• • • •	-	EAK IERGY	BK(	3MD	AR	E.A	(0:0	VCEN	47R.		SIGMF RROR		ZER	:RO	R —
•	X-COPF X-ANT) X-ARSE	(MC	11414	=	i10. 8 i64. 1 i57. 1.	4	511. 300. 380.	3760	59. 51. 173.	1.	009 802 098		ø.	0007 0040 0033	)		7. : 0. : 3. :	2
	1009: 1018: 1027:	:	553. 612. 560.		575. 670. 519.	529. 653. 554.	. 72	:3.	502. 725. 496.	70	20. 36. 21	544 723 472		524. 623. 507.	6	55. 20. 02.		
•	1117; 1126 1135	: 32	2632.		508. 479. 492.	6587. 73155. 463.	7318	88. S	421.6. 9357. 430.	3797		2522 16930 394	1, 5	1863. 5090. 366.		56. 33. 67.		
•	1301 1310 1319	:	142. 170. 163. F		116. 230. 128. E-PI	157. 437. 132. LE-UP	. 63 . 14	₹7. ∤2.	150. 740. 120. DATA.	7: 1:	28. 22. 37. REC:	137 614 132 TION =	}. ≥.	132. 408. 103. 000	2	.70. 259. .1.6.		
	PK ]	Т	ENER	(GY	Fi	REA	BKGNE	) F	чни	CHAN	WEL	LEFT	Р₩	CTS	5/SEC	:	ΖE	RR
	2 3 4	1. 3 3 3 1.	510. 559. 564. 602.	18 1.3	376	859. 462. 051. 700.	8611 4826 4309 3845	5.	l. 03 P. 40 2. 34 2. 35	1118.	. 70 . 58	1013 1107 1107 1106	33	3. 09 5. 49 6. 26 1. 78	LØE 0 58E 0	)9  1  2  2	7. Ø. Ø. 1.	2 6
	5 :	j.	646.	15		820.	2145	ī. 2	2. 67	1.292	. 50	1285	1.5	1. B	56E 0	181	8.	17.0

2.32

1314, 45 1305

17 5. 122E 00

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 19 DEC 1979 10:12:18 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\* \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00 SAMPLE IDENTIFICATION: S604C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9555, 900 UNITS: UG

SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE NAME: EFF. TAD1

ACQUISITION DATE: 19DEC79 202:33 \* FWHM(1332)2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 650. SEC \* SHAPE PÅRAMETER : 15.0 % 10.

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

:4:

DETECTOR: GEL.1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 750KV

0.5003803 KEYZCHNL: \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 99%

1314.42 1307 17 5.069E 00

#### UNKNOWN SAMPLE REPORT

657. 12

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		1 SIGMA ERROR	%ER	ROR
%-COPPER ●%-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 1	4012. 35	1312. 9029. 3041.	0. 006 1., 720 0. 097	33	0. 0006 0. 0039 0. 0032		9. 1 0. 2 3. 2
1009: 550. 1018: 552. 1027: 545.	584.	505. 508. 665. 639. 477. 488.	547. 672. 488.	542. 695. 479.	545. 663. 486.	521. 612. 513.	519. 565. 464.	
1117: 4994. 1126:31288. 1135: 593.	54440. 69	181. 5424. 582. 69738. 427. 388.	3907. 57274. 385.	2665. 36225. 365.	2406. 1.6280. 350.	4526. 4842. 335.	12543. 1241. 354.	
• 1301: 139. • 1310: 173. 1319: 152.	225. 114.	123. 128. 418. 632. 130. 116. UP CORRECTE	129. 696. 136. D DATA.	128. 667. 120. CORRECT	123. 590. 130. ION =	145. 396. 123. 1. 000	138. 258. · 114.	
PK IT ENER	KGY AREA	BKGMD	FЫНМ	CHANNEL.	LEFT P	W CTS	'SEC	ZERR
1 1 511. 2 3 559. 3 3 564. 4 1 602.	18 3061.4 13 359029 80 1.0447	. 4641. . 4012. . 3281.	3. 36 2. 41 2. 34 2. 33	1022. 41 1118. 69 1128. 59 1205. 87	1108 1108 1197	13 2.187 35 5.103 35 5.984 18 1.743	2E 01 4E 02 1E 01.	9. 1. 0. 7 0. 2 1. 2
5 :1 646.	<b>11</b> 749	. 2231.	2. 51.	1292. 42	1.284	1.7 1. 248	3F 00	9. 6

2. 41.

2155.

3041.



4. B Irrediction 12/19/79

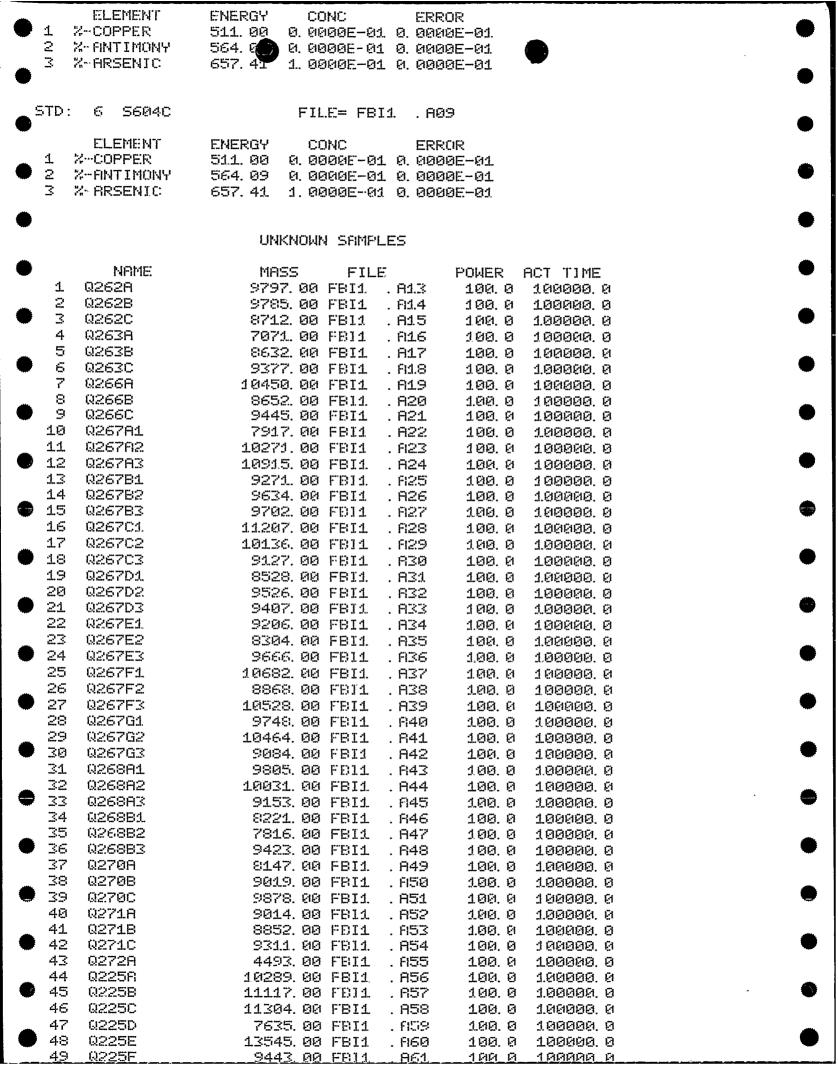
LASK QUIQUES SQ1

Q65C	7394.	999	91119065 RF 4TH IR	RADIATION	4 th irradiation 12/19/79
SAMFILE	SAM.	ит. 🍆	Z-COPPER	Z-AN <b>O</b> JONY	%-ARSENIC
● 0262C 0262C • 0262C	9797. 9785. 8712.	000	0.00164 0.00163 0 <u>.0</u> 0161 ***********************************	0. 01346	< 0.001.44 • 0.001.11 • 0.001.31 • •
•	કે ઉપૃથ	. •	0.00163 AVG 0.000014 SD 0.868992 XRSD :	0.01440 AVG 0.001727 SD 11.996777 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 0263A 0263B 0263C	.7071. .9632. **9377.	000	0. 04052 0, 03987 0. 04009	0. 73428 0. 81108 0. 79643	0. 00583 0. 00790 0. 00950
<b>(</b> )	of a greek	•	0.04016 RVG 1 0.000332 SD 0.827757 %RSD	0.78060 AVG 0.040777 SD 5.223841 XRSD	0.00774 AVG 0.001841 SD 23.773943 %RSD
0266B 0266B 0266C	10450. 8652. 9445.	999	0. 08020 0. 08211 0. 08056	9. 58224°	<pre></pre>
•			0.08096 AVG 0.001010 SD 1.248126 %RSD	0.59408 AVG 0.01.5098 SD 2.541431 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
• 0267A1 0267A2 0267A3	791.7. 10271. 10915.	000	0. 05848 0. 06076 0. 06208	0.66342	<pre>0.00321 0.00283 0.00302 0.00302 0.00302 0.00302 0.00302 0.00302</pre>
•		<u>.                                    </u>	0.06044 AVG 0.001823 SD 3.015640 %RSD	0.65527 AVG 0.051588 SD 7.872798 %RSD <sub>,</sub>	0.00000 RVG 0.000000 SD 0.000000 XRSD
● 026781, 1 026782 026783	9271. 9634. 9702.	999	0. 06360 0. 05612 0. 06473		< 0.00306 < 0.00291 < 0.00303
		* *	0.06149 AVG 0.004677 SD 7.607281 %RSD	0.66854 AVG 0.042825 SD 6.405751 XRSD	0.000000 %RSD 🛡
©0267C1 0267C2 √0267C3'	.11207. 10136. 9127.	000	9. 07912 9. 07468 9. 08060	Ø. 56147 (9. 58586 (9. 62712 (9. 58586)	<ul><li>0.00274</li><li>0.00282</li><li>0.00418</li></ul>
		٠	0.07813 AVG 0.003082 SD 3.944260 XRSD	0.59149 FWG 0.033186 SD 5.610662 XRSD	0.00418 AVG 0.000000 SD 0.000000 XRSD
0267D1 0267D2 0267D3	8528. 9526. 9407.	000	0. 05722 0. 05802 0. 05884	ø. 72162 °	<pre>0.00347 0.00345 0.00348 </pre>
•		·	0.05803 AVG 0.000812 Sb 1.399248 %RSD	0. 721.05 FIVG -0. 020709 SD -2. 872076 XRSD	0.00000 FVG 0.000000 SD 0.000000 XRSD

				1
● 0267E1 ↓	9206. 000	0. 05511	0. 68394	0.00328
0267E2	8304. 000	0. 05700		0.00338
0267E3	9666. 000	0. 05639		0.00302
•		0.05617 AVG 0.000962 SD 1.712936 %RSD	0.65584 AVG 0.024721 SD 3.769357 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 0267F1	10682. 000	0. 05102	0.57144	0. 00274
0267F2	8868. 000	0. 05369		0. 00323
0267F3	10528. 000	0. 05301		0. 00322
•		0. 05257 AVG 0. 001386 SD 2. 635608 %RSD	0.64156 AVG 0.060890 SD 9.490926 XRSD	0.00000 AYG 0.000000 SD 0.000000 %RSD
● 026761.	,9748. 000	0. 05625	0.65377 (	0. 00327
0267G2	1.0464. 000	0. 05993	0.63911 (	0. 00303
0267G3	9084. 000	0. 06359	0.651.00 (	0. 0031.7
•		0.05993 AVG 0.003669 SD 6.122930 %RSD	0.64796 AVG 0.007789 SD 1.202000 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
• 0268A1	9805. 000	0. 03212	0.00159 (	0.00116
0268A2	10031. 000	0. 02767	0.00129 (	0.00126
0268A3	9153. 000	0. 03337	0.00151. (	0.00136
•		0.03105 AVG 0.002996 SD 9.649734 %RSD	0.00146 AVG 0.000158 SD 10.813051 XRSD	0. 00000 AYG 0. 000000 SD 0. 000000 XRSD
• 0268B1	8221. 000	0. 03489	0.04812	0.00160
0268B2	7816. 000	0. 03582		0.00187
0268B3	9423. 000	0. 03725		0.00155
•		0.03599 AVG 0.001185 SD 3.291989 %RSD	0. 05052 AVG 0. 002318 SD 4. 588567 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● Q270A	8147. 000	0. 02532	0.00165	0.00154
Q270B	9019. 000	0. 03165		0.00140
Q270C	9878. 000	0. 03017		0.00123
•	,	0.02904 AVG 0.003311 SD 11.401608 %RSD	0.00153 AVG 0.0001.31 SD 8.562455 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD`
● Q271A	9014. 000	0. 05339	0. 63825	0. 00304
Q271B	8852. 000	0. 04818		0. 00307
Q271C	9311. 000	0. 05603		0. 00343
•		0.05253 RVG 0.003993 SD 7.600906 %RSD	0.68197 AVG 0.071535 SD 10.489442 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
●0272A	4493. 000	0. 03567	0. 7501.2	0.00599
0225A	10289 000	<u>0. 01947</u>		<u>0.75007</u>

(TI)TITLE: 91119065 RF 4TH IRRADIATION (LN)LIBRARY: (SA)SAMPLE TIME: 19DEC79 1030:00 (SE)STD ENERGY TOLERANCE: 2.00 (UE)UNK ENERGY TOLERANCE: 2.00 (TF)THERMAL FLUX: 0.0000E-01 (EF)EPITHERMAL FLUX: 0.0000E-01 0.0000E-01 (FF)FAST FLUX: (QU)UNITS: UG ELEMENT ENERGY HALF-LIFE SEC. X- COPPER 511. 00 1.2800F 01 H 4.6080E 04 X-ANTIMONY 564. 09 2.7200E 00 D 2. 3501E 05 W-ARSENIC 657, 41 2. 6300E. 01 H 9.4680E 04 STRINDARD SAMPLES NFIME. MASS FILE POWER ACT TIME S626A 1 8590.00 FB]1 . A01 100.0 1.00000.0 S626B 8411.00 FBI1 . A02 100.0 100000.0 56260 9050.00 FB11. . A03 1.99. 9 100000.0 4 7346.00 FBI1 S604A . A07 100.0 100000.0 5 S604B 8269.00 FBI1 . A08 100.0 100000.0 8545.00 FB]1 S604C . AØ9 100.0 100000.0 STD: 1 5626A FILE= FBI1 . A01 ELEMENT **ENERGY** COMC **ERROR** X-COPPER X-ANTIMONY 7.8000E-02 0.0000E-01 7.2000E-01 0.0000E-01 511. 00 564. 09 X-ARSEN1C 657, 41 0.0000E-01 0.0000E-01 STD: 2 FILE= FBI1. . A02 5626B ELEMENT ENERGY COMC ERROR Z-COPPER 511.00 7.8000E-02 0.0000E-01 X-ANTIMONY 564. 09 7. 2000E-01 0. 0000E-01 X-ARSEWIC 657. 41 0.0000E-01.0.0000E-01 3 56260 FILE= FBI1 . A03 ELEMEINT ENERGY COMO ERROR %-COPPER 511.00 7.8000E-02 0.0000E-01 X--FINT I MONY 564. 09 7. 2000E-01. 0. 0000E-01 X--ARSENIC 657.41 0.0000E-01.0.0000E-01. STD: 4 S604FI FILE= FBI1 . FØ7 ELEMEINT EMERGY CONC ERROR Z--COPPER 511.00 0.0000E-01 0.0000E-01 X-ANTIMONY 564.09 0.0000E-01.0.0000E-01. X-ARSENIC 657.41 1.0000E-01 0.0000E-01.

STD: 5 S604B FILE= FBI1 .A08



E 13	(MATERIA)	at all many at time, and and, you pro, up , g	~~~			 · · · · · · · · · · · · · · · · · · ·
50	0225G	11742.00 FBI1	. A62	100. O	100000.0	
<b>5</b> 1	Q225H	9156.00 FBI1.	. A63	100.0	1.00000.0	
52 =>	0225I	5 1. 00 FB11	. FI64	100.0	<b>1</b> 00000.0	
53	0225J	11608.00 FBI1	. A65	100.0	100000.0	_
<b>5</b> 4	0225K	8062.00 FB]1	. R66	100.0	100000.0	•
55 56	0225L	8081.00 FRI1	. A67	100. 0	100000.0	
56	0225M	11447.00 FB11	. A68	100.0	100000.0	_
<b>5</b> 7	0225N	9414.00 FBI1	. R69	100.0	100000.0	
58 =0	02250	9191.00 FB11	. A70	100. 0	1.00000.0	
59	0225P	8375.00 FBI1	. FI71	100.0	100000.0	_
<b>9</b> 60	Q225Q	10157.00 FBI1	. A72	100. 0	100000.0	•
61 50	0225R	9949.00 FBI1	. A73	100.0	1.00000.0	
62	02255	9766.00 FBI1	. A74	100.0	100000.0	_
<ul><li>63</li></ul>	0225T	12870.00 FBI1	. A75	100.0	1.00000.0	
64 /=	0302A	11193.00 FBI1	. A76	100.0	100000.0	
65	0302B	10197.00 FBI1	. 877	1,00.0	100000.0	
<b>6</b> 6	0302C	6789. 00 FBI1	. FI78	100.0	100000.0	
67	0302D	8867.00 FBI1.	. A79	100.0	100000.0	
68 <b>A</b> 70	0302E	9487.00 FBI1	. fi80	1.00. 0	100000.0	_
<b>9</b> 69	0302F	9103.00 FBI1	. A81	100.0	1.00000.0	
70	0302G	8228.00 FB11	. A82	1.00. 0	100000.0	
71	0302H	7845.00 FBI1	. A83	100.0	100000.0	_
72	0302I	12103.00 FBI1	. R84	100.0	100000.0	
73	0302J	9028.00 FBI1	. A85	100.0	100000.0	
74	0302K	7873.00 FBI1	. A86	100.0	1.00000.0	_
<b>9</b> 75	Q302L	11796.00 FBI1	. A87	100.0	100000.0	
76	Q302M	10897.00 FBI1.	. A88	100. 0	100000.0	
77	0302N	12074.00 FB11	. FI89	100.0	100000.0	_
<b>7</b> 8	03020	' 10306.00 FBI1	. A90	100. 0	100000.0	•
79	0302P	11616.00 FBI1	. FISI.	1.00. 0	100000.0	
80	03020	15686.00 FBI1	. f192	100.0	100000.0	_
<b>9</b> 81	Q302R	13426.00 FBI1.	. A93	1.00. 0	100000.0	-
82	Q302S	9244.00 FBI1	. A94	100.0	100000.0	
83	0302T	11534.00 FBl1	. A95	100.0	100000.0	
<b>9</b> 84	Q291FII.	12499.00 FBI1	. FI96	100.0	100000.0	•
85	Q291A2	15826.00 FBI1.	. A97	100. 0	100000.0	
86	0291A3	8756.00 FB]1	. FI98	100.0	100000.0	
<b>9</b> 87	029181	13440.00 FBI1	. A99	100.0	100000.0	•
88	029182	14726.00 FB11	. F:1.00	1.00. 0	1.00000.0	
89	Q291B3	9441.00 FBI1	. F)101	100. 0	100000.0	
90	Q291C1	14763.00 FBI1	. Fi1.02	1.00. 0	100000.0	
91	029102	8840.00 FB11	. A103	100. 0	100000.0	
<b></b> 92	Q291C3	12373.00 FBI1	. A104	100.0	100000.0	.au.
93	0291D1	10756.00 FBI1	. กป.05	1.00. 0	100000.0	•
94	0291D2	16584.00 FBI1.	. A106	100. 0	100000.0	
95	Q291D3	14907.00 FB11	. FI107	100.0	1.00000.0	,
96	0291E1	16118.00 FBI1	. A108	100. 0	100000.0	•
97	Q291E2	10390.00 FB11	. A1.09	100. 0	100000.0	
98	0291E3	13367.00 FBI1	. R110	100. 0	100000.0	
99	Q291F1	8801. 00 FB11	. A11.1.	1.00. 0	1.00000.0	
100	Q291F2	10838.00 FBI1	. R112	1.00. 0	100000.0	
<u> </u>	Q291F3	13483.00 FBI1.	. A11.3	100.0	1.00000.0	
<b>•</b> 102	Q291G1.	13510.00 FBI1	. FI114	100.0	100000.0	
103	Q291G2	8610.00 FBI1	. A115	100.0	100000.0	
_ 104	029163	7862.00 FB]1	. R116	100.0	100000.0	
<b>1</b> 95	Q291H1.	11.589. 00 FBI1	. A117	100.0	100000.0	•
106	Q291H2	10350.00 FBI1	. FI1.18	100.0	100000.0	
_ 107	Q291H3	9178.00 FBI1	. Fi119	100.0	100000.0	
<b>•</b> 198	029111	13041.00 FBI1	. A120	100.0	1.00000.0	•
109	029112	11122.00 FBI1	. A121	100.0	100000.0	
110	029113	12805.00 FBI1	. A122	100.0	1000000.0	
• 111	029111	13041.00 FBI1	. Fid.20	100.0	100000.0	
112	029112	11122.00 FBI1	. A121	100. 0	100000.0	<del></del>
_ 113	029113	12805.00 FR11.	. A1.22	100.0	100000. 0	
114	029113	12805.00 FRI1	. FI1.22	100.0	100000. 0	
115	029113	12805 00 FH11	<u> 8122</u>	100.0 100.0	_1000000.0 _100000_0_	_

	•
1.00000. 0 1.00000. 0 1.00000. 0 1.00000. 0	
199. 9 199. 9 199. 9 199. 9	
. R122 . R121 . R122 . R122 . R122	
90 FB11 90 FB11 90 FB11 90 FB11 90 FB11	
13041. ( 11 <b>0</b> 2. ( 12805. ( 12805. ( 12805. (	
Q291I3 Q291I3 Q291I3 Q291I3 Q291I3	
116 117 118 119 120 121 122	•

Activities of the design of th 20 DEC 1979 12:16:12 PM \*\*\*\*\* \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* 91119065 RF 4TH IRRADIATION SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: S626A TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8590, 000 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAB1 

ACQUISITION DATE: 19DEC79 1504:52 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621.. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRERY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ENERGY WINDOW 499.787 TO 674.920

PK IT ENERGY **FREH** BKGMD FWHM CHANNEL LEFT PW CTS/SEC ZERR FIT 1 1. 511.00 25276. 5844. 3.05 1022, 41, 1011 26 4.213E 01 0.83.79E 00 2 5 559.56 2683. 2095. 3.06 1119.46 111.0 29 4.472E 00 3.1 5.80E 01 3 5 564. 13 1.50013. 1218. 2.30 1128.59 1110 29 2.500E 02 0.3 602.74 1. 3955. 1319. 2.35 1205.76 1198 25 6.592E 00 2.1 2.1.6E 00 1. 646, 28 213. 844. 2.42 1292.77 1285 15 3.548E-01 20.5 1.88E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY FIREA CONCENTR. ERROR COMSTANT ERROR (1 SIGMA) (1 SIGMA) X-COPPER 511. 0 25276. 7.8000E-02 0.0000E-01 8.0948E-02 6.1572E-04 YMOMITMA-X 564. 1. 1.50013. 7. 2000E-01. 0. 0000E-01 4. 2479E-02 1. 1056E-04 **X-ARSENIC** 657.4 ₽. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\* 20 DEC 1979 12:17:23 PM \*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 91119065 RF 4TH IRRADIATION SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: S626B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8411, 000 UNITS: UG 'SAMFILI GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 19DEC79 1515:26 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10. :4: 

DETECTOR: GELI-8

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE:

\* L.IBRARY: NUCL. L IB1.

2. 000KV

KEVZCHNL:

0.5003803

\* HALF LIFE RATIO:

8.00

OFFSET:

-0.5932283 KEV

\* ABUNDANCE LIMIT:

85. 00%

:4:

EMERGY WINDOW 499. 787 TO 674. 920

PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC ZERR FIT 1 1 511.03 24746. 5407. 3.02 1.022.46 1.012 22 4.124E 01 0.8 5.05E 00 2 9 1.35 559. 68 2287. 892. 1.1.1.9. 69 1.1.08 34 3.812E 00 2.88.99E 17.1 3 Ξ) 564.13 152441. 1196. 2.32 1128.59 1108 34 2.541E 02 0.3 1 692, 77 4 3951. 1059. 2.35 1205.80 1195 19 6.584E 00 2.0 1.46E 00 5 1 645, 52 458. 690. 4. 12 9.4 6.03E QQ 1291. 25 1287 14 7.625E-01

PEAK SEFIRCH COMPLETED

STANDARD REPORT:

ELEMENT. ENERGY AREA CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.0 24746. 7.8000E-02 0.0000E-01 8.1713E-02 6.2268E-04 564. 1. ₽%-ANTIMONY 152441 7. 2000E-01 0. 0000E-01 4. 4167E-02 1. 1401E-04 X-ARSENIC 657.4 Ø. 9.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:18:29 PM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\* 91119065 RF 4TH IRRADIATION SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: S6260 TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9050, 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. THB1 ACQUISITION DATE: 19DEC79 1526:01 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC Ac. SENSITIVITY: 5.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NOR ITERATIONS: 10. 4: 

DETECTOR: GEL1-8 \* LIBRARY: NUCL, L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

-0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

EMERGY WINDOW 499, 787 TO 674, 920

PK IT ENERGY FIREA BKGND FWHM CHRMNEL LEFT PW CTS/SEC MERR FIT 1 :1. 511.01 25990. 6194. 3.1.2 1022.43 101.1 25 4.332E 01 0.8 2.58E 00 2 6 559, 55 2666. 1874. 2.75 11.19, 44 1.108 34 4.443E 00 3.0 4.70E 01. 3  $\tilde{\mathbb{C}}$ 564. 13 1571.99. 1224. 2.31 1128.59 1108 34 2.620E 02 0.3 1 602.74 4079. 1245. 2.32 1205.74 1.197 20 6.798E 00 2.0 1.46E 00 1 645.85 249. 788. 2. 1.8 14 4.155E-01 17.1 1.27E 1291.90 1284

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMEINT ENERGY AREA CONCEMBR. ERROR CONSTANT ERROR (1 SIGMA) (1 SIGMR) %-COPPER 511.0 25990. 7.8000E-02 0.0000E-01 8.0530E-02 6.0699E-04 ♪%-ANTIMONY 564.1 7. 2000E-01 0. 0000E-01 4. 2409E-02 1. 0779E-04 1571.99. **%-ARSENIC** 657.4 衐. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\*\*\* 20 DEC 1979 12:19:30 PM \*\*\*\*\*\* \* \*\*\*\*\*\*\*\*\* 91119065 RF 4TH IRRADIATION SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: S604A TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 7346, 000 UNITS: LIG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 \* ACQUISITION DATE: 19DEC79 1614:37 \* FWHM(1332) 2, 390

PRESET TIME(LIVE): 600. SEC :1: SENSITIVITY: 5. 000 ELAPSED REAL TIME: 645. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SFC: \* NER ITERATIONS: 10.

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL, LIB1 DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE:

2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 85. 00%

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT:

EMERGY WINDOW 499, 787 TO 674. 920

PK IT ENERGY FREA BKGND FWHM CHANNEL LEFT PW CTS/SEC MERR FIT 1 1. 510.98 1821. 6976. 3.38 1022.37 1014 16 3.036E 00 6. 9 4. 47E-01. 2 2 559, 17 1118.67 1107 30901. 3914. 2.41 35 5.1.50E 01. 0.67.23E 3 2 564.11 3231.06. 2. 32 3056. 1128.54 1107 35 5.385E 02 0.2 4 1. 692.78 8381. 2912. 2.35 1205.82 1197 18 1. 397E 01 1. 4 1. 19E 00 5 1 645, 82 533. 1291.85 1286 1606. 2. 27 13 8.887E-01 11.5 2.60E-01 1 657, 1.2 3002. 1985. 2. 31. 1314.42 1307 17 5.003E 00 2.8 1.22E

PERK SEARCH COMPLETED

STANDARD REPORT:

**ELEME:NT** ENERGY AREA CONCENTR. ERROR CONSTRINT ERROR (1 SIGMA) (1 SIGMA) 2-COPPER 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 511. 0 Ø. %-ANTIMONY 564. 1. 0. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 X-ARSFNIC 657.4 3002. 1.0000F-01 0.0000E-01 7.9427E-03 2.2091E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:20:34 PM \*\*\*\*\*\* \*\*\*\*\*\*\*\* 91119065 RF 4TH IRRADIATION SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: S604B TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8269.000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 19DEC79 1625:35 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 652. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. эk DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHML: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85. 00% EMERGY WINDOW 499, 787 10 674. 920 PK IT ENERGY AREA BKGMD FMHM CHRINNEL LEFT PW CTS/SEC ZERR FIT 1 1 510.99 2161. 3.59 7273. 1022.38 1016 14 3.601E 00 6.0 2.31E 00 2 559. 16 36409. 4520. 2, 38 1118.65 1108 35 6.068E 01 0.68.03E 2 564. 10 366272. 3557. 2.34 1128.53 1108 35 6.105F 02 0.2 4 602.74 1 9574. 3140. 2.35 1205.74 1198 16 1.596E 01 1.33.49E 00 5 1 645, 83 757. 2111. 2.84 1291.86 1285 15 1.262E 00 9.3 1.63E 00 1. 657. 09 R436. 231.6. 2.33 1314.36 1307 17 5.726E 00 2.6 1.01E 665.42 1. 1.248. 346. 2.23 1331.. 02 1326 10 5.760E-01 15.4 5.27E 00 PEAK SEARCH COMPLETED

STANDARD REPORT:

-	ELEMENT	ENERGY	REA	CONCENTR.	ERROR	CONSTANT	ERROR
-	•				(1 SIGMA)		(1 SIGMA)
	%-COPPER	511. Ø	Ø.	0. 0000E-01	0. 0000E-01	0. 0000E-01.	0.0000E-01
_	%-ANTIMONY	564. 1.	0.	0. 0000E-01.	0. 0000E-01	0. 0000E-01	0. 0000E-01
•	%-ARSENIC	657. 4	3436.	1.0000E-01	0. 0000E-01	8. 1142E-03	2. 1215E-04

\*\*\*\* 20 DEC 1979 12:21:37 PM \*\*\*\* \*\*\*\*\*\* dalaman indonésia dalaman dalam 91119065 RF 4TH TRRADIATION SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: S604C TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8545. 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TABI 

ACQUISITION DATE: 19DEC79 1636:42 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MER ITERATIONS: 10.

: |:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

•

ENERGY WINDOW 499.787 TO 674.920

PK IT ENERGY **FREA** BKGMD FWHM CHEWNEL LEFT PW CTS/SEC ZERR FIT 1 1. 511. 07 2513. 8874. 3, 65 1022.55 1015 17 4.1.89E 00 5.7 2.82E 00 2 2 559. 16 361.52. 5003. 2.37 1118.65 1108 31 6.025E 01 Ø. 6 9. 79E 3 2 564. 1.0 366271. 4380. 2.34 1128. 52 1.108 31. 6. 105E 02 9.2 602.74 4 1. 9356. 3955. 2, 28 1.205. 75 1197 20 1.559E 01 1.4 1.86E 00 5 1. 646.01 572. 1992. 2.61 1292 22 1287 13 9.532E-01 11.8 2.79E 00 1 657.14 3517. 1988. 2. 29 1314.46 1307 15 5.862E 00 2. 5 1. 10E

PERK SEARCH COMPLETED

#### STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
_				(1 SIGMA)		(1 SIGMF)
●%-COPPER	511. 0	얜.	0. 0000E-01	0. 0000E-01.	0. 0000E-01	0.0000E-01
%-ANTIMONY	564. J	0.	0. 0000E-01.	0. 0000E-01	0.0000E-01	0.0000E-01
_ %-ARSENIC	657. 4	3517.	1.0000E-01	0.0000E-01	8. 0782E-03	1.9880E-04

# SUMMARY OF STANDARD CONSTANTS:

1	ELEMENT	%-COPPER	AΥ	51.1	aa k	F-1,1

STANDARD NAME:	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A S626B S626C	7. 8000E-02 7. 8000E-02 7. 8000E-02	8. 0948E-02 8. 1713E-02 8. 0530E-02	6. 1572E-04 6. 2268E-04 6. 0699E-04
MEAN CONSTANT,	3 STDS:	8 1054F-02	~ 5509F_04

# 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
5626A 5626B	7. 2000E-01	4. 2479E-02	(1 SIGMA) 1.1056E-04
9626C	7. 2000E-01. 7. 2000F-01	4. 4167E-02 4. 2409E-02	1. 1401E-04 1. 0779E-04
MEAN CONSTANT,	3 STDS:	4. 2985E-02	6. 3913E-05

# 3. FLEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
5604A 5604B 5604C	1. 0000E-01 1. 0000E-01 1. 0000E-01	7. 9427E-03 8. 11.42E-03 8. 0782E-03	2. 2091E-04 2. 1215E-04 1. 9880E-04
MEAN CONSTANT,	3 STDS:	8. 0491F-03	1. 2126E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:22:58 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0262A

TYPE OF SAMPLE: UNKNOUN

SAMPLE QUANTITY: 9797, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAD1.

\*

ACQUISITION DATE: 19DEC79 1720:51 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* RBUNDANCE LIMIT: 85. 00%

ELEMFNT	PEAK ENERGY	EKGND	ARE.A	CONCENTR.	1 SIGMA ERROR	ZERROR
2-COPPER ●2-ANTIMONY 2-ARSENIC	564. 2		536. 3848. 0. <			1. 7
• 1009: 17. 1018: 35. 1027: 29.		58.	20. 13. 99. 105. 17. 15.	114. 80	0. 17. 0. 65. 1. 7.	
1117: 21. 1126: 322. 1135: 6.		781. 74	1.4. 20. 41. 666. 12. 6.	41.7. 174	. 56.	1.23. 1.6. 5.
	10. 12.	8. <u>:</u> 9. <u>:</u>	11. 10.	7. 10	. 10.	16. 10. 6.
PK IT ENER				CHRNNEL LEFT		SEC MERR
1 1 511. 2 1 564. 3 1 602.	17 3848	3. 238	3. 2.29	1022.51 1013 1128.68 1119 1206.09 1198	19 6. 414	

91119065 RF. 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0262B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9785.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

ACQUISITION DATE: 19DEC79 1731:04 \* FWHM(1332) 2.390 PRESET TIME(L)VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 19.

:1

**>** 

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCF LIMIT: 85.00%

:}

ELEMENT	PEA ENER		iND	AREA	CONCEN		SIGMA CRROR	%ERRC	JR
%-COPPER •%-ANTIMON %-ARSENIC	lY 564		21.		0. 901 9. 913 9. 991	5 9	9. 0001 9. 0003 40T DETE	1.	
• 1009: 1018: 1027:	26. 3				12. 88. 9.		66.	33. 36. 8.	
	188. 46		13. 652. 9.	18. 483. 8.	23. 339. 6.	22. 150. 4.		120. 21. 6.	
1301: 1310: 1319:	7. 9.	9. 7. 7. 8. 7. 6. PILE-UP C	3. 4.	7. 6.	5. 4. 3. CORRECT	6. 5.	4. 3.	2. 7. 3.	
PK IT E	NERGY	AREA	BKGND	FWHM	CHFINNEL	LEFT PW	CTSZ:	SEC %	ERR
2 1 5	i64. 14	529. 31.49. 86.	326. 221. 165.	2. 30	1.022. 62 1128. 60 1205. 01	1120 18		E 00 1	. 5 . 9 . 7

# 91119065 RF 47H IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q262C

SHAPLE IDENTIFICATION: Q262C TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8712.000 UNITS: UG

♥ SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

**:**†:

ACQUISITION DATE: 1.9DEC79 1741:19 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

**>** 

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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### UNKNOWN SAMPLE REPORT

ELEME	NT	PEAK ENERGY	BKGND	) <u> </u>	REA	CONCENT		1 SIGMA ERROR	%ERROR
%-COF ●%-ANT %-ARS	TMONY	511. 1. 564. 2 657. 4	243 176 85	i. 2	461. 777. Ø. C	0. 0016 0. 0133 0. 0013	\$	0. 0001 0. 0003 NOT DET	6. 7 2. 0 FECTABLE
• 1009 1018 1027	): 20.	32.	7. 52. 15.	19. 78. 7.	6. 75. 6.	8. 79. 12.	16. 83. 15.	13. 51. 11.	1.8. 36. 6.
1117 1126 1135	i: 232.	41.2.	16. 548. 6.	13. 534. 3.	9. 466. 1.0.	20. 296. 5.	19. 135. 12.	36. 48. 6.	97. 11. 8.
<ul><li>1301</li><li>1316</li><li>1315</li></ul>	): 6.	7.	8. 7. 6.	9. 8. 7.	5. 7. 6.	9. 6. 6.	5. 6. 3.	6. 8. 7.	7. 9. 4.
	1	PULSE-PIL	E-UP COF	RRECTED	DATA.	CORRECT	LCIN =	1.000	

PK IT ENERGY HREA BKGND FWHM CHANNEL LEFT PW CTS/SEC MERR 1 1. 511. 12 463... 242. 2. 93 1.022. 66 1.013 23 7.676E-01 6. 7 2 :1. 564.17 2777. 176. 2.34 1128.66 1118 22 4.628E 00 2.0 3 1. 602.77 118. 1.69. 2. 87 1205.80 1197 25 1. 965E-01 18. 1

\*\*\*\*\*\* 20 DEC 1979 12:26:13 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0263A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7071. 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 1751:33 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 61.6. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE:

2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGNI	D A	REA	CONCEN	1R.	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 1. 657. 2	3690 910 344	0. 1.23	31.2. 733. 164.	0. 040! 0. 734: 0. 005:	3	0. 0006 0. 0024 0. 0010	1, 5 0, 3 17, 9
• 1009: 163. 1018: 541. 1027: 513.	164. 765. 293.	197. 1054. 227.	181. 1426. 171.	170. 1587. 146.	182. 1634. 169.	226. 1420. 157.	265. 1868. 1.61.	373. 747. 136.
1117: 509. 1126:10787. 1135: 114.	630. 18750. 2 93.	598. ?3472. ; 62.	601. 24186. 85.	571. 19572. 54.	525. 12496. 54.	711. 5469. 64.	1542. 1.522. 64.	4448. 291. 54.
• 1301: 33. 1310: 28. 1319: 28.	32. 27. 30. ULSE-PILE	28. 40. 33. E-UP COI	31. 59. 30. RRECTED	34. 66. 33. DATA.	19. 58. 24. CORRECT	26. 62. 29. ION =	30. 45. 32. 1. 900	34. 36. 30

	PK	1.1	ENERGY	AREA	BKGND	FИНМ	CHANNEL LEFT	ΡИ	CTS/SEC	ZERR
)	1	1.	511. 05	9312.	3696.	3.00	1022.51.1012	21	1.552E 01	1. 4
	2	3	559. 32	3112.	1298.	2. 67	1118.98 1107	32	5.187E 00	2. 4
_	3	3	564. 13	123733.	91.0.	2. 35	1128.60 11.07	32	2.062E 02	Ø. 3
•	4	:1.	602. 75	3302.	650.	2. 32	1205. 77 1198	17	5. 503E 00	2. 1
	5	1.	645. 92	270.	495.	3. 31	1292.05 1283	15	4. 500E-01	13. 1
	6	1.	657. 22	164.	344.	2. 1.5	1314. 62 1310	11	2. 728E-01	17.8

# 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0263B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8632.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:+:

ACQUISITION DATE: 19DEC79 1802:04 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

**>** 

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

4

#### UNKNOWN SAMPLE REPORT

657.11

269.

572.

1.

ELEMENT	PEAK ENERGY	BKGND	FIRE	A CC	INCENTR.	1 SIGMA ERROR	%ERROR
%-COPPFR ●%-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 1	6392. 1319. 572.	1.107 16653 26	6. 0	1. 0399 1. 8111 1. 0079	0.0006 0.0023 0.0011	1. 5 0. 3 14. 0
• 1009: 225. 1018: 705. 1027: 612.	257. 989. 400.	283. 1299. 1 321.	1698. 1		/77. 295 134. 1625 132. 185	. 1303.	453. 915. 188.
1117: 698. 1126:14673. 1135: 157.	815. 25498. 3 11.6.	841. :1990. 3: 128.	2264. 26	i598. 1.64	°08. 928  19. 7140  09. 107	. 2054.	5998. 440. 99.
1301: 49. 1310: 41. 1319: 37.	57. 57. 41. ULSE-PILE	49. 59. 48. E-UP CORF	51. 91. 38. RECTED D	96. 43.	46. 40 85. 87 44. 50 RECTION =	. 54.	51. 52. 36.
PK IT ENER	GY ARE	A BKO	SND FW	IHM C:HRM	WEL LEFT	PW CTSZ	SEC XERR
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	32 381 12 16653 77 434	19. 16 86. 13 12. 13	560. 2. 319. 2. 304. 2.	49 111.8 34 1.128 34 1.205	2.43 1012 3.98 1107 3.57 1107 5.81 1198 68 1285	27 1. 846 31. 6. 365 31. 2. 776 22 7. 236 14 5. 527	00 2.2 02 0.2 00 1.9
		······································	n'I line line	tarani aliania di		.T W. W. [	a wal alama ab

2.40

1314.42 1308

13 4.488E-01 14.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:28:32 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 02630

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9377, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THE1.

\*

ACQUISITION DATE: 19DEC79 1812:38 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

-0.5932283 KEV

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET:

\* REUNDANCE LIMIT: 85. 99%

### UNKNOWN SAMPLE REPORT

657.13

350.

489.

ELEMENT	PEAK ENERGY	BKGND	) f	7REA	CONCE	1TR.	1 SIGMA ERROR	ZERROF	₹ -
X-COPPER X-ANTIMONY X-ARSENIC		5956 1403 489	s. 177		0. 046 0. 796 0. 009	<b>:</b> 4	0. 0005 0. 0022 0. 0010	1. 4 0. 1 1.0. 5	3
1009: 255. 1018: 719. 1027: 646.		1.435.	1797.	287. 1926. 243.	1974.	1733.	363. 1378. 209.	985.	
1117: 708. 1126:15534. 1135: 168.	26889.	34460. 3		751. 28260. 120.			2089.	6259. 467. 104.	
<ul><li>1310: 50.</li><li>1319: 33.</li></ul>	61.	49. 70. 44. F-UP COS	92. 53.	106. 41.	58.	79. 43.	74. 48.		
PK IT ENER			(GND		CHANNEL			SEC XEI	RR
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> </ul>	33 42 13 1773 75 47	06. 2 1.0. 1 39. 1	L020.	3. 22 2. 81 2. 33 2. 33	1.022. 45 1119. 00 1128. 58 1.205. 76	1108 1108	25 1.998 43 7.010 43 2.955 16 7.898	E 00 2.; E 02 0.;	5. 5
5 1 646.	10 2	93.	840.	2. 54	1292. 41	1.286	15 4.889	E-01 15.:	1

2.47

1.314, 44 1309

12 5.841E-01 10.4

# 9111.9065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0266A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10450.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABS

:4:

ACQUISITION DATE: 19DEC79 1823:16 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 699. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1

# UNKNOWN SAMPLE REPORT

1.

645.78

317.

712.

ELEMENT	PEAK ENERGY	PKGMD	F	REH	CONCE	ITR.	1. SIGMA ERROR	%ER	ROR
%-COPPER •%-ANTIMONY %-ARSENIC	564. 1	1445	. 151	l 328.	9. 611	1.	0. 0018		0. B
• 1009: 274. 1018: 1182. 1027: 1130.	1942.	2856.	3704.	4075.	4118.	3741.	527. 2697. 181.	1867.	
1117: 480. 1126:13161. 1135: 149.	23173.	29089. 2	9583.		15253.	6413.	1902. 1785. 112.	371.	
1301: 46. 1310: 54. 1319: 54.	51.	57. 48.	56. 51.	71 51.	60. 45.	72. 38.	49. 47.	49.	
PK IT ENER	GY FIR	EA BK	GND	FWHM	CHANNEL	LEFT F	°W CTSZ	SEC	%ERR
<ul> <li>1 1 511.</li> <li>2 5 559.</li> <li>3 5 564.</li> <li>4 1 602.</li> </ul>	48 24 13 1513	57. 2 28. 1	059. 445.		1022. 47 1119. 29 1128. 58 1205. 85	1111	30 4. 412 30 4. 095 30 2. 522 22 6. 925	E 00 E 02	0. 8 3. 3 0. 3 1. 9

3. 27

1291.76 1284

16 5.282E-01 13.2

\*\*\*\*\*\*\* 20 DEC 1979 12:30:54 PM \*\*\*\*\*\*\*\*\*\*\*\*\*\* \* \*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q266B

TYPE OF SAMPLE: UNKMOWN

SAMPLE QUANTITY: 8652, 999 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**4**:

ACQUISITION DATE: 19DEC79 1833:50 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
■ X-ANTIMONY	564. 1	4626.	119156.	0. 0821 0. 5822 0. 0033	0. 0020	Ø. 3
• 1009: 211. 1018: 1011. 1027: 903.	1.636.	2288. 30	59. <mark>351</mark> 8.	232. 32 3446. 299 173. 16	5. 2386.	1.488.
1117: 358. 1126:10495. 1135: 90.	18176. 2	417. 4 3385. 235 84.	18. <mark>19166</mark> .	466. 65 12096. 521 68. 7		270.
1301: 29. 1310: 31. 1319: 29.	45. 36.	35. 26.	59. 45.	28. 3 53. 5 23. 2 CORRECTION	8. 40. 3. 25.	33. 39. 43.
PK IT ENER		A BKGN	D FWHM	CHANNEL LEFT		'SFC XERR
1 · 1 · 511. 2 · 1 · 564. 3 · 1 · 602. 4 · 1 · 646.	13 11915 80 321	6. 462 3. 80	6. 2.32 8. 2.35	1022. 48 1011 1128. 60 1120 1205. 88 1195 1292. 29 1282	18 1.986 19 5.355	5E 02 0.3 5E 00 2.2

\*\*\*\*\*\*\*\*\* 20 DEC: 1979 12:32:08 PM \*\*\*\*\*\*\*\*\*\*\* \* \*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 02660

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9445, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 1844:20 \* FWHM(1332) 2, 390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

ELEMENT	PEAK ENERGY B	KGND	AREA	CONCE		L SIGMA ERROR	%ERROR
Z-COPPER ● Z-ANTIMONY Z-ARSENIC	51.1. 0 564. 1 657. 4		3579. 1322. 0. <	0. 086 0. 586 0. 003	39	0.0007 0.0019 NOT DETI	0.9 0.3 ECTABLE
• 1009: 208. 1018: 1102. 1027: 995.	199. 24 1780. 251 637. 39	3. 3226.	264. 3700. 231	298. 3684. 179.	372. 31.06. 1.82.	443. 2408. 177.	697. 1.702. 1.96.
1117: 413. 1126:11112. 1135: 116.	448. 49 19962. 2544 94. 8		475. 21111. 76.	501 13393. 66.	767. 5646. 74.	1627. 1574. 77.	4721. 306. 65.
• 1301: 38. 1310: 24. 1319: 35.		6. 62. 3. 30.	42. 51. 32. D DATA.	36. 41. 36. CORRECT	38. 60. 40.	44. 45. 40.	38. 35. 27.
PK IT ENER	GY AREA	BKGND	FWHM	CHANNEL		1.000 4 CTS/:	SEC %ERR
1 1 511. 2 10 559. 3 10 564. 4 1 602.	70 2166. 14 131322.	4488. 758. 983. 985.	3. 17 1. 35 2. 32 2. 34	1022. 44 1119. 74 1128. 60 1205. 85	1107 1107	22 3.930 35 3.609 35 2.189 22 5.924	E 00 2.8 E 02 0.3

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267A1

SHOPLE IDENTIFICATION: 0267A: TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7917.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:1:

ACQUISITION DATE: 19DEC79 1854:55 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

'DHTE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1		1959.		0.0007 0.0021 NOT DETE	Ø. З
• 1009: 177. 1018: 688. 1027: 667.	1098. 1		2245.	204. 247. 2260. 1993. 151. 113.	1501.	1018.
1117: 295. 1126: 9651. 1135: 93.		323. 335. 798. 22.058. 68. 76.		417. 630. 11595. 4905. 51. 62.	1391.	3846. 248. 48.
● 1310: 31. 1319: 27.	26. 26.	30. 38. 38. 35. 35. 25. JP CORRECTE	22.	30. 37. 22. 35.	37. 39.	25. 40. 31.
PK IT ENER		BKGND		CHANNEL LEFT I		SEC %ERR
9 1 1 511. 2 1 564. 3 1 602.		3670.	2. 33	1022, 46 1.011 1128, 60 1118 1205, 82 1197	24 2. 3681 20 1. 8661 17 5. 0171	± 02 0.3

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267A2

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 10271.00

SAMPLE QUANTITY: 10271.00 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

UNITS:

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ACQUISITION DATE: 19DEC79 1905:25 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 622. SEC \* SHRPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

• ELEMENT	PEAK ENERGY	EKGND	AREA	CONCEN		1 SIGMA ERROR	ZERROR
X-COPPER ●X-ANTIMONY X-ARSENIC	564. 1	5396. 1	60274.	Ø. 663	4	0. 0020	Ø. 3
• 1009: 257. 1018: 977. 1027: 858.	<b>1511</b> . 2	227. 273 1097. 2652 336. 293	. 3003.	323. 2983. 243.	2514.		1.361.
1117: 408. 1126:14166. 1135: 137.	24590. 31	500. 490 351. 31440 110. 99	. 25683.	560. 1.6035. 78.	6952.	1.836.	372.
• 1301: 45. 1310: 40. 1319: 31.	49. 23.	48. 46 44. 51. 37. 39 -UP CORRECT	. 39. . 48.	51. 38.	47. 35.	53. 49.	
PK IT ENER				CHFINNEL	•		SEC ZERR
1 1 511. 2 1 564. 3 1 602. 4 1 645.	13 160274 79 4463	H. 5396. B. 1112.	3, 19 2, 33 2, 41, 2, 81	1022. 40 11.28. 58 1205. 85 1292. 01	1120 1198	25 3.162 18 2.671 16 7.438 14 5.487	E 02 0.3 E 00 1.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:35:23 PM \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q267A3

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10915.00 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 1915:59 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: *600.* SEC \* MBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL.. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* RBUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR	1 Sl ERR		OR 
X-COPPER •X-ANTIMONY X-ARSENIC	564. 1.	6416. 2 6389. 17 706.	9971	0. 7023	Ø. Ø		. 0 . 3
1009: 254. 1018: 1011. 1027: 966.	<b>1</b> 584. 2		3202.		2736. 21	54. 669. 50. 1585. 26. 206.	
1117: 453. 1126:16042. 1135: 195.	27377. 34	545. 560. 619. 35560. 123. 115.	608. 28963. 125.		<sup>7</sup> 885. 21	75. 6556. 62. 448. ø5. 9ø.	
• 1310: 39. 1319: 56.	72. 48.	39. 53. 57. 50. 57. 52.	67. 45.	49. 40.	56. 50.	59. 49. 47. 46.	
PK IT ENER		UP CORRECTE BKGND		CHANNEL LE			ERR
1 1 511. 2 1 564. 3 1 602. 4 1 645.	13 179971 77 4877	6389. . 121.6.	3. 21 2. 34 2. 33 2. 54		L20 19 3 L98 17 8	.000E 02 0	. 9 . 2 . 8 . 4

# 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q26781

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9271.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

ACQUISITION DATE: 19DEC79 1926:37 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

general days grann and solin conditions. Loss books 6 521 1600.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

ELEMENT	PEAK ENERGY	BKG	√D :	AREA	CONCEN	ITR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 4	748 478 53	38. 15	7588. 2455. 0. <	0, 063 0, 701 0, 003	7	0. 0007 0. 0021 NOT DET	1. 1. 0. 3 ECTABLE
• 1009: 203 1018: 827 1027: 811	. 1382.	191. 2007. 347.	232. 2404. 273.	252. 2714. 232.	260. 2753. 192.	331. 241.0. 210.	1894.	569. 1280. 210.
1117: 338 1126:13375 1135: 142	. 23077.	396. 29666. 96.	448. 29673. 93.	512. 24373. 97.	590. 1.5445. 74.	866. 6768. 84.	1.881.	5425. 379. 88.
● 1301: 36 ● 1310: 52 1319: 42	. 31 . 28.	44. 34. 32.	34. 36. 44.	34. 45. 33.	47. 47. 36.	45. 51. 33.		44. 33. 33.
•	PULSE-PIL	.E-UP C(	DRRECTE	D DATA.	CORRECT	10N =	1. 000	

	PK	1.1.	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	РΜ	CTS/SEC	ZERR
•	1	1.	511. 02	1.7588.	7483.	3. 21	1022. 45	1011	37	2. 931E 01	1. 8
	2	1.	564. 13	152455.						2.541E 02	
_	3	1	602. 78	4069.	1244.	2. 29	1205, 82	1.195	21	6. 782E 00	2. 0
	4	1	645, 52	256.	567.	3. 05	1291, 25	1286	12	4. 274E-01.	14.5

# 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q267B2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9634.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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· :k

ACQUISITION DATE: 19DEC79 1937:11 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

34

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*

ELEMENT			AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	4400.	139755.	Ø. 6202	0.0019	Ø. 3
• 1009: 219. 1018: 821. 1027: 744.	1219.	1737. 22	89. 2602.	280. 3 2592. 22 167. 1	74. 1790.	1.1.61.
1117: 330. 1126:12036. 1135: 109.	21204. 2		82. 22574.	522. 7 14116. 61 79.	29. 1726.	321.
• 1310: 32. 1319: 32.	32. 41.	33. 31.	46. 42.	32.	36. 35. 28. 33.	41.
•	:GY ARE			CHANNEL LEF		/SEC %ERR
<ul> <li>1 1. 511.</li> <li>2 1 564.</li> <li>3 1 602.</li> <li>4 1 646.</li> </ul>	14 13975 79 388	'4. 503 i5. 440 i9. 85 i6. 65	0. 2.32 0. 2.33	1022.51.101 1128.60 111 1205.86 119 1292.67 128	8 22 2 329 5 19 6 482	9E 02 0.3

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q267B3

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9702.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

4:

ACQUISITION DATE: 19DEC79 1947:45 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

1 , 692, 89

646, 09

1.

4200.

318.

ELEMENT	PEAK ENERGY B	KGND	FREA	CONCENT		SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1.		.8377. 14856. Ø. C	0. 0647 0. 6837 0. 0030	' (	0.0007 0.0021 NOT DETE	1. 0 0. 3 CTABLE
• 1009: 226. 1018: 913. 1027: 836.	243. 21 1409. 200 539. 35	5. 2687.	323. 2992. 250.	281 2987. 203.	345. 2543. 229.	466. 2010. 227.	601. 1339. 200.
1117: 388. 1126:13452. 1135: 122.	413. 42 23534. 3008 105. 11	7. 30490.	511. 24878. 68.	582. 15627. 88.	941. 6878. 90.	1915. 1963. 82.	5608. 397. 92.
● 1301: 39. ● 1310: 33. 1319: 35.	33. 4 36. 4 47. 3 ULSE-PILE-UF	2. 48. 5. 32.	40. 33.	45. 53. 34. CORRECT I	40. 37. 40. ON = :	41. 51. 37. 1. 000	29. 55. 34.
PK IT ENER	GY AREA	BKGND	FИНМ		EFT PW		EC %ERR
<ul><li>1 1 511.</li><li>2 1 564.</li></ul>		5279. 4912.			.011 2: .119 1:		

2.29

2. 39

1205.88 1195

1292.38 1283

19 7.000E 00

19 5. 300E-01 13. 6

1093.

779.

# 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267C1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11207.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

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:†:

ACQUISITION DATE: 19DEC79 1958:19 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCE		1. SIGMA ERROR	XERROR
%-COPPER •%-ANTIMONY %-ARSENIC	564. 1	7839. 2 5837. 14 584.	6628.	0. 979 9. 561 9. 992	15	0. 001.7	0. 9 0. 3 ECTABLE
• 1009: 261. 1018: 1225. 1027: 1193.	1847. 27	76. 245. 85. 3511. 12. 284.	3893.	4018.	3531.		1764.
111.7: 426. 1126:12880. 1135: 136.	22488. 284	28. 550. 86. 28697. 08. 111.		578. 14997. 91.		1738.	5179. 381. 84.
• 1301: 42. 1310: 32. 1319: 38.	34.	58. 57. 33. 31.	48. 35.	64. 39.	57. 21.	42. 44.	44. 39. 32.
PK IT ENER		BKGND	F:WHM		LEFT P	W CTS/	
1 1. 511. 2 1. 564. 3 1 602. 4 1. 645.	80 4163.	7839. 5837. 1078. 626.	3. 17 2. 33 2. 36 2. 89	1022, 50 1128, 60 1205, 88 1291, 45	1120 1195	36 4.283 18 2.444 19 6.938 15 4.746	E 02 0.3 E 00 1.9

### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267C2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10136.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

:40

ACQUISITION DATE: 19DEC79 2008:53 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

3

#### UNKNOWN SAMPLE REPORT

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1.

646. 00

266.

600.

ELEMENT	PEAK ENERGY	EKGNE	) F	AREA	CONCEN		1 SIGMA ERROR	%ER	ROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 1.	1.025	5. <u>1.3</u> 8		Ø. 585	19			0. Z
• 1009: 248. 1018: 985. 1027: 947.	1596.		2858.			2880.	450. 2283. 158.	630. 1547. 182.	
1117: 434. 1126:11970. 1135: 116.	20934.	26798. 2	26869.		51.8. 13786. 74.	6125.	1753. 1690. 73.	334.	
• 1310: 29. 1319: 37.	26.		43. 27.	55. 22.	20.	45. 42.	38. 36.	35. 40. 26.	
PK IT ENER			(GND		CHANNEL			SEC	ZERR
<ul> <li>1 1 511.</li> <li>2 9 559.</li> <li>3 9 564.</li> <li>4 1 602.</li> </ul>	63 23 13 1381.	12. 19. :	1722. 844. 1025. 702.	1. 40 2. 33	1022. 46 1119. 60 1128. 59 1205. 86	1.110 1110	24 3.622 28 3.853 28 2.302 18 6.41.6	E 00 E 02	0.8 2.7 0.3 1.9

2.42

1292. 20 1285

15 4.430E-01.14.4

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267C3

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9127.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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ACQUISITION DATE: 19DEC79 2019:27 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEV/CHNL: 0.5003803 \* HALF LIFE RATIO:

\* HALF LIFE RATIO: 8.00

2. 000KV

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1:

#### \_UNKNOWN\_SAMPLE\_REPORT

1.

657. 29

1.42.

● ELEMENT	PEAK ENERGY	BKGND	HREA	CONCENTR	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. Ø 564. 1 657. 3		20920. .32880. 1.42.	0. 0806 0. 6271 8. 6642	0. 0020	
• 1009: 184. 1018: 995. 1027: 937.	211.	201. 223 2203. 2961 354. 222	. 219. . 3303.	3266. <u> </u>	0.0008 332. 446. 820. 2137.	570. 1491.
1117: 413. 1126:11477. 1135: 106.	479.	488. 476 5783. 26087 72. 92	. 504. '. 21.350.	572. 13236. 5	176. 168. 686. 1570. 3795. 1671. 80. 68.	161 4583. 325. 70.
1301: 46. 1310: 26. 1319: 31.	29. 34.	27. 37 37. 36 31. 36 -UP CORRECT	5. 54. 5. 36.	58. 33.	36. 32. 53. 41. 37. 37.	35. 33. 30.
PK IT ENER			<b>Р</b> ЫНМ	CHFINNEL LE		/SEC %ERR
<ul> <li>1 1. 511.</li> <li>2 6 559.</li> <li>3 6 564.</li> <li>4 1 602.</li> </ul>	46 228: 13 13288: 82 373:	2. 1331. 3. 992. 7. 738.	3. 1.3 2. 45 2. 32 2. 30	1022, 43 16 1119, 26 11 1128, 59 11 1205, 90 11	.07 32 3.80 .07 32 2.21 .97 18 6.22	4E 00 3.1 5E 02 0.3 8E 00 1.9
5 1 645.			2. 38	1292.09 13	<sup>2</sup> 84 14 4. 22	8E-01 14.8

2.54

1.314. 76 131.1

10 2.365E-01 19.2

300.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:43:18 PM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267D1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8528, 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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ACQUISITION DATE: 19DFC79 2029:56 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

1.

645.69

305.

684.

ELEMENT	PEAK ENERGY	BKGND	<u> </u>	EA	CONCENT		SIGMA ERROR	%ER!	ROR 
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	4710.	137 1383	44.	9. 7991	L.	0.0007 0.0022 NOT DETEC	Ę	1. 2 3. 3 ≅
1018: 719.	1079.	192. 1502. 1 297.	864.	2230.	255. 2265. 1.63.	277. 1.930. 171.	<b>1</b> .509.	468. L040. 159.	
1117: 366. 1126:11994. 1135: 142.	20769. :				548. .4211. 62.	727. 6025. 68.		1984. 358. 80.	
<ul><li>1310: 27.</li><li>1319: 31.</li></ul>	42.	39. 39. 31 E-UF CORF	47. 35.	47. 33.	42.	50. 29.	32. 50. 23. 1. 000		
PK IT ENER	GY ARI	EA BKO	IND F	инм сн	IANNEL I	EFT PW	CTS/SE	EC:	ZERR
1 1 511. 2 1 564. 3 1 602.	15 1383	44. 47	10. 2	. 33 11	322, 52, 3 128, 62, 3 205, 84, 3	1119 2	4 2.291E 0 2.306E 9 6.304E	92 I	1. 1. 0. 3 2. 0

2. 94

1291. 58 1284

19 5.080E-01 13.4

\*\*\*\*\* 20 DEC 1979 12:44:23 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267D2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9526.000 UNITS: LIG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TRB1.

ACQUISITION DATE: 19DEC79 2040:31 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 PELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 1.64.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* RBUNDANCE LIMIT: 85. 00%

•	ELEMENT	PEAK ENERGY	BKGN	D f	REA	CONCE		1 SIGMA ERROR	XERROR	
•	X-COPPER X-ANTIMONY X-ARSENIC		507 51 4 64	0. 158	5423. 3992. Ø. <	0. 058 0. 721 0. 003	L6	0.0007 0.0022 NOT DET	1. 1 0. 3 ECTABLE	
•	1009: 269. 1018: 832. 1027: 751.	253. 1211. 457.	244. 1822. 346.	279. 2238. 280.	246. 2600. 226.		321. 2110. 192.		529. 1.159. 222.	
•	1117: 390. 1126:13860. 1135: 157.	426. 24065. 112.	469. 30744. 99.	506. 31255. 113.	545. 25699. 105.		939. 7114. 80.	1994. 1885. 80.	5516. 421. 85.	
	1301: 55. 1310: 53. 1319: 43.	51. 42.	44. 56. 44.	54. 47.	49. 51. 36.	63. 45.		40. 47. 34.	46. 45. 36.	
•	PK IT ENER	'ULSE-P1L 'GY' FIR		RRECTEI KGND	) DATA. FWHM	CORRECT			SEC ZERR	?
•	1 1 510. 2 1 564. 3 1 602. 4 1 645.	1.4 1589 78 43	92. 31.	5072. 51.40. 1175. 1012.	2. 33 2. 39 2. 36	1022. 39 1128. 61 1205. 83 1292. 01	1118 1197	23 2.570 20 2.650 20 7.218 19 4.463	E 02 0.3 E 00 1.9	

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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: @267D3

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 9407, 000

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

UNITS:

UG

ACQUISITION DATE: 19DEC79 2051:05 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO:

8.00 OFFSET:

-0.5932283 KEV \* RBUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCER		1 SIGMA ERROR	XERROR
%-COPPER •%-ANTIMONY		5710. 16	5298. 1025.	0. 058 0. 741	.5	0. 0007 0. 0022	1. 2 0. 3
%-ARSENIC	657. 4	638.	Ø. <	0.003	35	NOT DETE	ECTABLE
<b>1</b> 009: 255.	230.	235. 255.	257.	34.5.	31.7.	414.	527.
1018: 743.	1244. 1	724. 21.71.	2481.	2459.	21.82.	1.648.	1164.
1027: 756.	500.	299. 264.	252.	220.	204.	199.	202.
1117: 388.	489.	502. 549.	510.	570.	899.	1982.	5620.
_ 1126:14124.	24651 31	374. 31642.	25759.		7162.	2001.	388.
<b>1135</b> : 143.	131.	111. 107.	97.	110.	99.	92.	105.
1301.: 45.	34.	42. 48.	40.	37.	52.	53.	43.
<b>1310</b> : 43.	50.	52. 63.	51.	53.	53.	55.	50.
1319: 42.	46.	37. 44.	48.	48.	43.	34.	34.
p		UP CORRECTE					
PK IT ENER	GY AREA	BKGND	FWHM	CHANNEL	LEFT P	W CTS∕:	SEC ZERR
<b>1</b> 1. 511.	02 1.52.98	. 6104.	3. 16	1022. 45	1011	28 2. 5501	E 01. 1.1.
2 1 564.	13 161025	. 5710.	2. 33	1128. 60	1120	18 2. 6841	E 02 0.3
<b>3</b> 1 602.	78 4504	. 1197.	2. 29	1205.83	1.1.96	21 7. 5061	
<ul><li>4 1. 645.</li></ul>	75 304	. 536.	2. 75	1291. 70	1287	<b>11</b> 5. 059	E01 12.2

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:46:34 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF 4TH ]RRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLF IDENTIFICATION: Q267E1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9206, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 19DEC79 2101:40 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 61.9. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* L.IBRARY: NUCL. L.IB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	EKGND	A	REA	CONCE		1 SIGMA ERROR	%ER	ROR
%-COPPER ●%-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 4	6502 4980 536	. 145	:890. :085. :0. <	0. 055 0. 683 0. 003	39	0.0007 0.0021 NOT DETI	į	1. 3 0. 3 E
• 1009: 208. 1018: 746. 1027: 645.	248. 1120. 405.	228. 1574. 314.	205. 2030. 238.	249. 231.0. 222.	248. 2270. 207.	279. 2003. 188.	357. 1548. 181.	475. 1.059. 175.	
1117: 334. 1126:12511. 1135: 146.	402. 21945. : 106.	426. 28444. 2 104.	456. 8429. 80.	476. 23580. 88.	578. 14742. 80.	841. 6473. 88.	1764. 1814. 73.	5077. 338. 86.	
• 1301: 43. 1310: 47. 1319: 40.	40. 32. 39.	51. 45. 44.	36. 45. 41.	39. 38. 43.	32. 46. 22.	40. 45. 37.	40. 33. 38.	39. 43. 36.	٨
PK IT ENER	ULSEP1LI GY ARI				CORRECT CHANNEL		1.000 W CTS/	SEC :	ZERR
1 1. 511. 2 1. 564. 3 1 602. 4 1. 645.	14 1450; 76 39;	35. 4 28. 1	502. 980. 071. 626.	2. 32	1022. 46 1128. 61 1205. 78 1292. 17	1.119 1.196	31 2.315 20 2.418 21 6.546 15 5.004	E 02	1. 2 0. 3 2. 0 3. 1

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267E2

SAMPLE IDENTIFICATION: Q267E2
TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8304.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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ACQUISITION DATE: 19DEC79 2112:13 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 17ERATJONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBJ

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN'		I. SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1.		12835. 123407. 0.		1	0.0007 0.0021 NOT DETE	1. 2 0. 3 CTABLE
• 1009: 187. 1018: 640. 1027: 593.	1063.		933. <mark>2085</mark>	. 226. . 2095. . 149.	1.785.	328. 1339. 161.	480. 936. 153.
1117: 325. 1126:10617. 1135: 113.	18597. 2	369. : 24113. 246 77.	596. 20197	. 492. . 12608. . 71.	5456.	1495.	
	36. 25.	42. 29.		. 29.	39. 28.	37. 29.	30. 32. 36.
PK IT ENER	:GY ARE	LA BKGI	ND FWHM	CHFINNEL	LEFT FI	√ CTS/S	SEC ZERR
<ul> <li>1 1. 510.</li> <li>2 1. 564.</li> <li>3 1. 602.</li> <li>4 1. 645.</li> </ul>	15 12340 81 351	97. 43; 14. 7(	20. 2.30 31. 2.30	1022. 37 : 1128. 62 : 1205. 89 : 1291. 94	1119 ; 1197 ;	24 2.139E 20 2.057E 17 5.856E 15 3.490E	02 0.3 00 2.0

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267E3

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 9666,000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

4:

UG

ACQUISITION DATE: 19DEC79 2122:44 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SFNSITIVITY: 5.000
ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

**>** 

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

:4:

UNKNOWN SAMPLE REPORT

645.97

304.

490.

● ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 1		14640. 141448. 0.	0. 637	'4 1	0. 0020	Ø. 3
• 1009: 224. 1018: 737. 1027: 616.			143. 2413	t. 2306.	275. 2079. 188.		488. 1.064. 1.93.
1117: 337. 1126:12371. 1135: 128.		27250. <u>2</u> .8	423. 491 023. 22870 89. 90		741. 6269. 62.	1797.	1958. 353. 69.
• 1301: 28. • 1310: 39. • 1319: 39.	32. 29.	33.		). 50. 3. 35.	35. 44. 28. 10N =		
PK XT ENER	KGY ARI	EA BKG	ND FWHM	CHFINNEL		CTS/SE	EC ZERR
1 1 511. 2 1 564. 3 1 602.	14 1414	48. 46		1022. 44 1128. 62 1205. 82	1120 1	3 2.440E 8 2.357E 1 6.549E	02 0.3

2.94

1292.15 1286

14 5.071E-01 11.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:49:58 PM \*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 9111.9065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q267F1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10682, 00 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 2133:18 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	EKGND	HREH	CONCENT		SIGMA ERROR	XERROR
%-COPPER %-ANTIMONY %-ARSENIC		6192. 4878. 486.	1.4500. 1.39871. 0. <	0. 0510 0. 5714 0. 0027	- ‡	0.0006 0.001.8 NOT DETE	1, 2 Ø, 3 CTABLE
• 1009: 205. 1018: 746. 1027: 703.	1113.	216. 2: 1632. 20: 315. 2:	48. 2427.	2344.	272. 2039. 156.	356. 1649. 150.	530. 1.072. 155.
1117: 345. 1126:12054. 1135: 124.	390. 21525. 2 104.	6909. 274	30. 438. 71. 22957. 33. 86.	14151	746. 6173. 73.	1594. 1782. 69.	4807. 323. 73.
• 1301: 32. 1310: 34. 1319: 31.	33. 32.	36. : 40. : 34. : -UP CORRE	38. 36. 28. 40.	27.	44. 33.	47. 30.	35. 38. 28.
PK IT ENER				CHANNEL I		1.000 J CTS/S	EC %ERR
<ul> <li>1 1. 511.</li> <li>2 1. 564.</li> <li>3 1 602.</li> <li>4 1 646.</li> </ul>	1.4 13987 82 385	1. 487: 2. 108	3. 2.33 7. 2.27	1128, 61 : 1205, 91 :	1120 1 1195 2	32 2.417E .9 2.331E 33 6.420E 34 4.592E	. 02 0.3 . 00 2.0

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267F2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8868.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 19DEC79 2143:48 \* FWHM(1332) 2.390 PRESET TIME(L)VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GBLJ-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCE		1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. Ø 564. 1 657. 4		12547. 38149. 0. <	0. 051 0. 681 0. 001	L1	0.0008 0.0021 NOT DETI	1. 4 Ø. 3 ECTABLE
• 1009: 201. 1018: 670. 1027: 633.		195. 203. 382. 1825. 282. 237.	. 2011.	226. 2097. 175.	271. 1799. 181.	358. 1378. 159.	452. 959. 140.
1117: 335. 1126:11794. 1135: 115.	375. 20825. 27 103.	400. 419 262. 27246. 92. 82.	. 22324.	·	781 6161. 71.	1628. 1700. 71.	4821. 324. 56.
• 1301: 41. 1310: 35. 1319: 42.	33. 41.	41. 31. 40. 42. 26. 30.	. 36. . 37.	46. 32.	36. 35. 30.	35. 33. 41.	24. 29. 27.
PK IT ENER		UP CORRECTI I BKGND	ED DATA. FWHM	CORRECT	TON =	1. 000	
1 1 511. 2 1 564. 3 1 602. 4 1 645.	1.4 138149 79 3600	. 4508. . 1041.	3. 12 2. 31 2. 33 2. 65	1022. 47 1128. 61 1205. 84 1292. 17	1.1.19 1199	42 2. 091. 19 2. 302 17 6. 000 25 4. 200	E 02 0.3 E 00 2.1

\*\*\*\* 20 DEC 1979 12:52:13 PM \*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*

#### 9111.9065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q267F3

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.0528.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:4:

ACQUISITION DATE: 19DEC79 2154:18 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

ELEMEINT		BKGND		CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER ●%-ANTIMONY %-ARSENIC	564. <i>1.</i>	5429.	161.539.	Ø. 6721	9. 9929	Ø. 3
• 1009: 234. 1018: 783. 1027: 734.	1113.	1640. 21	97. <mark>24</mark> 97.	275. 3 2427. 20 218. 3	1594. <b>1</b> 594.	1145.
1117: 359. 1126:13896. 1135: 119.	24595. 3	1718. 319	15. 25935.	684. 8 16392. 71 85.	.71. 2013.	
● 1310: 53. 1319: 40.	47. 45.	53. 46.	51. 68. 28. 43.	45. 55. 43. CORRECTION	56. 51. 40. 33.	40. 40. 38.
•		A BKGM		CHANNEL LEF		'SEC %ERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	14 16153 77 452	8. 527 9. 542 3. 107 4. 72	9. 2.31 3. 2.29	1022, 48 101 1128, 60 113 1205, 80 113 1292, 30 128	9 19 2 692 95 19 7 539	2E 02 0.3 9E 00 1.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:53:18 PM \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 RF 4TH 1RRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 026761

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9748, 000 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABI

UNITS:

UG

ACQUISITION DATE: 19DEC79 2204:52 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

DETECTOR: GEL1-8

\* LIBRARY: NUCL. [ IB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0. 5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

ELEMENT		BKGND			CONCEN	TR.	d. SIGMA ERROR	%ERR(	DR 
%-COPPER •%-ANTIMONY %-ARSENIC	564. <u>1</u>	4770.	145	218.	Ø. 653	8	0. 0020	Ø.	2
• 1009: 213. 1018: 831. 1027: 735.	1094.	223. 1527. : 316.	2075.	2273.	2302.	2079.	355. 1603. 165.	1.082.	
1117: 330. 1126:12638. 1135: 132.	21858. 2	441. 28602. 2: 89.	3747.	23519.	14809.	6390.		351	
1301: 38. 1310: 43. 1319: 43.	46.	55. 31.	51. 32.	38. 34.	42. 38.	53. 37.	38. 34.	40.	
PK IT ENER	:GY FIRI	EA BKI	GND	FWHM	CHANNEL	LEFT P	W CTS/:	SEC %	ERR
<ul> <li>1 1. 511.</li> <li>2 1. 564.</li> <li>3 1. 602.</li> <li>4 1 646.</li> </ul>	14 1452: 80 40:	79. 51 1.8. 4 57. 1.1 96. 1	770. 329.	2. 31 2. 38	1022. 54 1128. 61 1205. 87 1292. 56	1120 1195	25 2. 363  18 2. 420  22 6. 761  15 3. 266	E 02 0. E 00 1.	1.3.9.7

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0267G2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10464.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

ACQUISITION DATE: 19DEC79 2215:26 \* FWHM(1372) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

REYZCHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* RBUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

645, 72

325.

599.

• E	ELEMEN	T	PEAK ENERGY	BKG.	ND	AREA	CONCE	4TR.	1. SIGMA ERROR	%EK	:ROR
•		MONY		52	75. 15	2104.		91	0.0007 0.0019 NOT DET		1. 1 0. 3 E
•			1299.	1760.	2302.	2631.	2582.	2274.	405. 1762. 184.	1175.	
•	1117: 1126: 1135:	1.3324.	437. 22928. 112.	432. 29695. 84.	29911.		15482.	807. 6600. 75.	1813.	353.	
•	1310:	39. 36.	51. 38.	49. 42.	49. 48.	46. 43.	35.	42. 29.	46. 36.	31. 25. 40.	
•	PK IT				UKKEUTE. BKGND	р рыты. Ешнм	CORRECT CHANNEL			'SEC	%ERR
•	1 1 2 1 3 1	564.		104.	6184. 5275. 985.	3. 12 2. 32 2. 33	1022, 45 1128, 61 1205, 81	111.9	29 2.677 20 2.535 20 7.143	5E 02	1.0 0.3 1.8

2.43

1291.65 1286

14 5.416E-01 12.0

# 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 026703

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9084.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

\*

:1:

ACQUISITION DATE: 19DEC79 2226:00 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

-44

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 \_OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

ELEMENT -	PEAK ENERGY	BKGND	AREA	CONCENT	1 SIGN R. ERRON	•• •
%-COPPER • %-ANTIMONY %-ARSENIC	564. 1	4437.	134249.	0. 6510	0. 003	21 0.3
• 1009: 167. 1018: 768. 1027: 661.	1164.	1607. 20	144. 2263.	. 2361.	<mark>2053. 1571</mark>	L. 1977.
1117: 309. 1126:11484. 1135: 139.	20467. 2	387. 4 61.51. 265 83.	55. 21565.	. 13756.		5. 4683. 9. 321. 4. 68.
• 1301: 49. • 1310: 27. • 1319: 35.	34. 26.	41. 28.	<ul><li>25. 49.</li><li>28. 24.</li></ul>	. 46. . 28.	39. 27 29. 24	?. 35. ¥. 29.
PK IT ENER	GY ARE	A BKGM	ID FWHM		ON = 1.000 EFT PW C7	
1 1 511. 2 1 564. 3 1 602. 4 1 645.	14 13424 75 375	19. 443 10. 79	;7. 2.32; ;5. 2.33		11.9	

### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0268A1

'SAMMLE IDENTIFICHTION: U268H1 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9805.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 1.9DEC79 2236:31 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* LIBRARY: NUCL\_ LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

+

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 4	294. 96. 64.	7915. 354. 0. <	0. 0321 0. 001.6 0. 0012	0.0004 0.0001 NOT DET	1. 2 6. 6 ECTABLE
• 1009: 29 1018: 312 1027: 271	. 536.	765. 10:	41. 36. 33. 1173. 40. 22.		70. 102. 01. 748. 6. 9.	158. 520. 4.
1117: 7 1126: 37 1135: 3	. 51.	4. 86. :	5. 4. 71. 61. 4. <i>ε</i> .		9. 5. 11. 7. 8. 3.	18. 9. 5.
• 1301: 5 1310: 2 1319: 3	. 5.	6. 8. 6. -UP CORRE	2. 8. 5. 5. 4. 7.	9. 2.	3. 3. 8. 8. 8. 7. = 1.000	1. 3. 5.
PK IT ENE				CHANNEL LEF		SEC ZERR
<ul><li>1 1 511</li><li>2 1 564</li></ul>				1022.47 101: 1128.49 112		

\*\*\*\* 20 DEC 1979 12:57:34 PM \*\*\*\*\*\*\*\*\*\*\* \*

9111.9065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0268A2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10031.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 2246:45 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 691. SEC \* SHAPE PARAMETER : 1.5.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. L.161

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: KEV/CHNL: 0.5003803

2. 000KV \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMEI	4T	PEAK ENERGY	BKGND	ř	AREA	CONCE		1 SIGMA ERROR	%ER	:ROR
%-COPI ●%-ANT %-ARSI		511. 0 564. 0 657. 4	351. 62 79	•	5911. 292. 0. <	0. 027 0. 001 0. 001	L <b>3</b>	0.0004 0.0001 NOT DET		1. 3 7. 0 E
• 1009 1018 1027	: 263.	21. 479. 152.	17. 665. 71.	21. 905. 41.	37. 1109. 18.	38. 1.079. 21.	57. 954. 10.	98. 647. 9.	158. 428. 4.	
1117 1126 1135	: 34.	4. 55. 7.	9. 74. 8.	4. 62. 6.	4. 44. 6.	3. 28. 7.	1. 1.0. 2.	5. 4. 5.	10. 3. 9.	
• 1301 • 1310 1319	; 7. ; 8.	3. 9. 6. ULSE-PILI	5. 4. 2.	7. 7. 2. perte	7. 4. 5.	4. 5. 5. CORREC	5. 11. 3.	4. 6. 7.	6. 4. 6.	
PK I				GND	FWHM	CHRNNEL			SEC	%ERR
	1 511. 1 563.			351. 62.	2. 98 2. 06	1022. 48 1128. 23		27		1. 3 7. 0

🗗 \* 20 DEC 1979 12:58:37 PM \*\*\*\*\*\*\*\*\*\* \*\*\*\* \*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DRITE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0268A3

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUENTITY: 9153.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

:k

ACQUISITION DATE: 19DEC79 2256:59 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

564.08

312.

196.

2

1.

ELEMENT		EAK ERGY	BKGND	AREA	CONCEN		SIGMA ERROR	%ERRO	R -
X-COPPER X-ANTIMON X-ARSENIC	Y 5	11. 0 64. 1 57. 4	351. 196. 76.	7535. 312. 0. <	0. 033 0. 001 0. 001	5 (	3.0004 3.0001 NOT DETE	1. : 8. : CTABLE	
1018: 2		18. 488. 7 161.	17. 2 28. 103 71. 4		48. 11 <u>2</u> 1. 21.	51. 911. 12.	93. 733. 11.	1.75. ^ 514. 4.	
1117: 1126: 1135:	6. 34. 4.	5. 54. 6.	66. 5	7. 11. 9. 39. 6. 8.	39.	13. 27. 6.	9. 9. 6.	15. 9. 8.	
1301: 1310: 1319:	4. 4. 9, PULS	2. 2. 3. E-PILE <b>-</b> U	6. 8. 1	9. 5. 5. 10. 0. 4. TED DATA.	7. 6.	10. 5. 9. 10N = :	12. 6. 5. 1. 000	4. 7. 5.	
PK IT E	NERGY	AREA	BKGND	FЫНМ	CHANNEL	LEFT PW	CTS/S	EC %E	RR
<b>1</b> 1 1 5	11 02	7535.	351	. 3. 15	1022. 45	1011 20	S 1. 256E	01 1.	2

2. 62

1128.48 1119

28 5. 204E-01.

\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 12:59:42 PM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 026881

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8221.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 2307:13 \* FWHM(1332) 2.390 PRESET TIME(L1VE): SEC 600. \* SENSITIVITY: 5.000 | ELAPSED REAL TIME: 602. SEC \* SHRPE PARRMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV 85. 00%

\* ABUNDANCE LIMIT:

ELEMENT	· ************************************	PEAK FNERGY	BKGN	D !	AREA	CONCEN		1 SIGMA ERROR	%ER!	ROR
X-COPPER X-ANTIMO X-ARSENT	'\' <b>'</b>	51.1. 0 564. 2 657. 4	69 36 8	6.	7013. 8915. 0. <	0. 048	11	0.0005 0.0005 NOT DETI	:	1. 4 1. 1. E.
1018:	26. 270. 288.	37. 477. 146.	34. 706. 82.	29. 959. 43.	42. 101.4. 26.	50. 1.1.09. 23.	59. 934. 19.	93. 708. 19.	159. 446. 12.	
1117:	19. 774. 11.	20. 1341 9.	23. 1658. 7.	27. 1763. 13.	34. 1433. 4.	945.	53. 416. 12.	1.11. 110. 10.	278. 25. 8.	
1301: 1310: 1319:	6. 4. 6.	12. 5. 5. JLSE-P1L	8. 8.	2. 5. 6.	1.0. 3.	9. 3.	7. 8. 6.	7. 5.	6. 4. 5.	
PK 1T	ENERO			KGND	FWHM	CHANNEL.			SEC	ZERR
2 1	511. 9 564. 1 602. 8	L6 89	13. 15. 94.	693. 366. 1.33.	3. 10 2. 37 2. 46	1022, 49 1128, 65 1205, 93	1118	28 1. 1.69 24 1. 486 19 4. 907	E 01	1. 3 1. 1. 8. 0

\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 026882

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7816, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 19DEC79 2317:27 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. L181 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEYZCHNL: 0.5003803

\* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK FNERGY	BKGND	AREA	CONCENTR	1 SIGMA . ERROR	%ERROR
%-COPPER 0%-ANTIMON %-ARSENIC		456.	8917.	0. 0358 0. 0507 < 0. 001.9	0. 0006	1. 4 1. 1 FECTABLE
1018: 2		25. 677. 80.	925. 1088	3. 1028. :	53. 85. 895. 658. 26. 29.	150. 454. 15.
	27. 28. 77. 1363. 15. 1.5.	28. 1.750. 1 8.		l. 45. l. 908. 12.	55. 119. 411. 105. 6. 8.	298. 24. 12.
1301: 1310: 1319:	9. 7. 3. 7.	4. 10.			9. 15. 11. 6.	7. 9. 8.
PK IT E	NERGY FI	REA BKG	ЭМО БИНМ	CHANNEL LE	FT PW CTS.	YSEC %ERR
2 1. 5	i64. 14 8	91.7. 4	547. 3. 04 156. 2. 31. 230. 3. 01	1022, 46 10 1128, 60 11 1205, 95 11	19 24 1. 486	SE 01 1.1

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q268B3

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 9423.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

:4:

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ACQUISITION DATE: 19DEC79 2327:42 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
	564. 2		11161.	0.0372 0.0527 0.0015		1. 0
• 1009: 32. 1018: 358. 1027: 324.	607.	823. 1.10	31. 1227.		. 835.	186. 524. 18.
1117: 24. 1126: 946. 1135: 13.		2116. 222	44. 47. 23. 1.843. 11. 1.2.		. 153.	358. 36. 14.
<ul><li>■ 1310: 7.</li><li>1319: 6.</li></ul>	9. 1.2.	9. 10.	<ol> <li>6.</li> <li>12.</li> </ol>	12. 6 6. 8	. 6.	14. 7. 4.
PK IT ENER				CORRECTION = CHANNEL LEFT		SEC %ERR
	03 842 16 1116 84 34	L. 43	5. 2.33	1022.48 1011 1128.65 1118 1205.94 1199	26 1.404E 22 1.860E 15 5.660E	E 01 1.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 20 DEC 1979 1:03:00 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: Q270A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8147, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 19DEC79 2337:55 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL, L.184

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTI	*	SIGMA RROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 4	351. 1.57. 74.	4905. 301 0.	0. 0253 0. 0016 < 0. 0015	0.	9004 9001 DT DETECT	1. 6 8. 2 FABLE
• 1009: 15 1018: 194 1027: 186	. 329.	25. 486. ( 55.	1.9. 26 583. 694 33. 1.5	. 742.	39. 657. 11.		LØ8. 31.4. 5.
1117: 4 1126: 28 1135: 9	. 48.	10. 38. 6.	5. 8 52. 48 4. 8		7. 21. 11.		27. 6. 7.
1301: 7 1310: 4 1319: 8	. 3. . 7.	6. 9. 3. E-UP CORRI	6. 6	. 5. 5. 9. 5. 7. 1. CORRECTI	9. 6. 6. ON = 1.	7. 5. 9. . 000	5. 3. 6.
PK IT ENE	RGY ARE	ia ekgi	ND FWHM	CHANNEL LI	EFT PW	CTS/SEC	C ZERR
<ul><li>1 1 511</li><li>2 1 564</li></ul>	·		51 3.14 57. 3.05	1022. 48 1. 1128. 46 1:		8. 174E ( 5. 014E-(	

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 02708

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9019.000 UNITS: UG

👽 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME.: EFF. TAB1

+:

ACQUISITION DATE: 19DFC79 2348:10 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA FRROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 1 564. 3 657. 4	364. 121. 75.	6725. 280. 0. <	0.0316 0.0014 0.0014	0. 0004 0. 0001 NOT DET	1. 4 8. 2 ECTABLE
• 1009: 15. 1018: 270. 1027: 273.	427.	<b>651</b> . 88	34. 31. 36. 996. 34. 19.	1035. 88	i8. 96. 86. 684. .3. 9.	158. 444. 3.
1117: 7. 1126: 23. 1135: 8.	43.		7. 4. 31. 58. 5. 7.	29. 1	8. 8. 7. 6. 4. 6.	13. 9. 6.
1301: 7. 1310: 2. 1319: 5.	7.	9.	5. 7. 1.2. 5. 5. 5. CTFD DATA.	4. 5.	5. 4. 6. 3. 6. 3. = 1.000	5. 4. · 4.
PK IT ENER	RGY ARE	A EKGNI	) FWHM	CHANNEL LEFT	PW CTS/	SEC ZERR
<ul><li>1 1 511.</li><li>2 1 564.</li></ul>				1022.55 1011 1128.84 1119		

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0270C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9878.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:4:

ACQUISITION DATE: 19DEC79 2358:24 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER •%-ANTIMON %-ARSENIC	511. 0 ' 564. 4 657. 4	375. 1.28. 68.	6956. 343. Ø. <	0.0302 0.001.6 0.0012	0. 0004 0. 0001 NOT DETE	1.3 7.1 CTABLE
1018: 20	22. 22. 56. 445. 58. 144.	20. 708. 9 84.	20. 31. 971. 1067. 39. 31.	51. 62. 1043. 889. 16. 10	. 649.	1.58. 461. 4.
1117: 1126: 2 1135:	9. 8. 28. 55. 4. <i>6</i> .	4. 54. 8.	7. 8. 69. 82. 8. 4.		. 11.	18. 3. 6.
1301: 1310: 1319:	6. 2. 4. 8. 4. 5. PULSE-P1L	8. 5. 3. E-UP CORRE	2. 7. 3. 5. 6. 5. ECTED DATA.	4. 5 5. 3	. 9. . 7.	8. 5. 3.
PK IT E	VERGY AR	EA BKG	√D FWHM	CHANNEL LEFT	PW C:TS/S	SEC ZERR
	L1. 00 69 54. 38 3		75. 3.08 28. 2.36	1022.41 1011 1129.08 1122	25 1.1598 16 5.7198	

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0271A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9014.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:†:

ACQUISITION DATE: 20DEC79 8:38 \* FWHM(1332)2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: --0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

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267.

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•	ELEMENT	PEAK ENERGY	BKGNI	D f	AREA	CONCEN		1 SIGMA ERROR	2EF	ROR
•		564. 1		4. 128		0. 053 0. 638 0. 003		0. 0021		1. 3 0. 3 E
•	1009: 213. 1018: 602. 1027: 567.	880.	189. 1313. 258.	1.595.	1840.				377. 859. 168.	
•	1117: 272. 1126:10902. 1135: 108.		338. 24931. : 62.		379. 20710. 60.	1.3376.	728. 5828. 42.	1748.	4341. 320. 60.	
•	1301: 24. 1310: 35. 1319: 30.	35. 25.	28. 26. 20.	33. 30.	25.	37. 30.	22.	21. 33.	32. 19. 35.	
•	PK IT EMER	'ULSEPIL RGY AF		KGND	эрнин. Бинм	CORRECT			SEC	ZERR
	1 1 511. 2 1 564. 3 1 602.		55.	4068. 3734. 828.	3. 11. 2. 32 2. 31	1022. 43 1128. 63 1205. 87	1119	24 1. 855 19 2. 138 18 6. 200	E 02	1. 2 9. 3 2. 9

2.42

1292.20 1285

17 4.457E-01 13.8

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 02718

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8852.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 20DEC79 19:07 \* FWHM(1332)2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 19.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLFRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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ELEMENT	PEAK FNERGY	BKGND	AREA	CONCENT		IGMA ROR XEF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 1	3927.	126682.	0. 6431	Ø. (	3021	1. 4 0. 3 .E
• 1009: 209. 1018: 523. 1027: 497.	835.	207. 17 1134. 144 224. 18	2. 1574.	1596.	1387. 13	L34. 831.	
1117: 314. 1126:10830. 1135: 105.	19121. 2	311. 38 4768. 2501 68. 6	.0. 20438.	12927.	5589. 15	504. 4378. 553. 31.9. 46. 56.	
• 1301: 43. 1310: 29. 1319: 22.	27. 30.	21 2	.9. 36. 3. 28.	29. 38.			
PK IT ENER			,	CHANNEL L.			%ERR
<ul> <li>1 1. 511.</li> <li>2 1. 564.</li> <li>3 1. 602.</li> <li>4 1. 645.</li> </ul>	14 12668 75 369	32. 3927 97. 798	'. 2. 32 ). 2. 38	1022.50 1 1128.61 1 1205.77 1 1291.70 1	118 21 2 197 22 (	1.628E 01 2.111E 02 5.162E 00 4.822E-01:	1. 4 0. 3 2. 0 11. 3

\*\*\*\* 20 DEC: 1979 1:08:23 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 02710

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9311,000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 29:38 \* FWHM(1332) 2. 398 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

**\*** 

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

-0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		SIGMA ERROR	%ERROR
2-COPPER ● X-ANTIMONY X-ARSENIC	564. 1	4757.	158104.	0. 764:	5	0. 0023	Ø. 3
• 1009: 248. 1018: 676. 1027: 639.	966.	1390. 17:	39. 220. 33. 1979. 59. 215.	1.935.	1730.	1334.	
	23752. 3	398. 4; 3865. 312; 97. 1:	77. 25527.	576. 16072. 95.	7033.	2028.	
1301: 43. 1310: 41. 1319: 29.	40. 37.	42.		31. 32.	31.	44. 35.	
PK IT ENER	GY ARE	A BKGNI	Э БИНМ	C:HANNEL I			SEC ZERR
<ul> <li>1 1 511.</li> <li>2 1 564.</li> <li>3 1 602.</li> <li>4 1 645.</li> </ul>	1.4 1.5810 80 459	4. 475 3. 114	7. 2.32 4. 2.34	1022, 46 : 1128, 61 : 1205, 86 : 1291, 73 :	1118 2 1195 2	23 1.9738 21 2.6358 22 7.6648 21 5.7178	02 0.3 00 1.8

#### 91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00 SAMPLE IDENTIFICATION: 0272A

'SHUMLE IDENTIFICATION: U272A TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 4493.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

\*

ACQUISITION DATE: 20DEC79 40:12 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITFRATIONS: 10:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

•	ELEMEN		PEAK ENERGY	BKG	ND F	AREA	CONCEN	ITR.	1 SIGMA ERROR	%ERR	OR
	X-COPPE X-ANTII X-ARSEI	10NY	511. 1 564. 2 657. 4			3603. 4716. 0. <	0. 035 0. 750 0. 006	11	0.0010 0.0030 NOT DET		:. 8 !. 4
•	1009: 1018: 1027:	107. 220. 214.	97. 351. 185.	95. 466. 111.	121. 548. 102.	135. 667. 80.	85. 586. 75.	102. 567. 91.	128. 493. 88.	164. 333. 89.	
•	1117: 1126: 1135:	293. 6250. 51.	355. 10964. 48.	390. 14457. 36.	360. 14793. 40.	347. 12201. 42.	327. 7753. 29.	41.5. 3444. 31.	874. 938. 38.	251 <i>0.</i> 186. 30.	
•	1301: 1310: 1319:	19. 20. 21.	16. 32. 11. ULSE-PI	22. 26. 21.	1.8. 37. 27.	22. 43. 20.	18. 36. 23.	15. 31. 17.	14. 35. 21.	1.2. 22. 1.8.	
•	i Diz vii:	han P 1 han b. *			ORRECTE		CORRECT		1. 000		

	PK	I.I.	ENERGY	FIREA	BKGND	FWHM	CHANNEL	L.EFT	PИ	CTS/SEC	ZERR
•	1	1.	511. 06	3603.	3284.	3. 27	1022. 53	1013	29	6. 004E. 00	2. 8
	2	:3	559. 51	1.944.	892.	2. 91	1119.35	1109	29	3.240E 00	3. 1
_	3	3	564. 1.6	74716.	490.	2. 31	11.28. 65	1109	29	1. 245E 02	0.4
•	4	:1.	602.83	2184.	631.	2. 35	1205. 94	1196	29	3. 641E 00	2. 7
	5	1.	646. 25	155.	276.	2. 01.	1292. 70	1285	13	2. 586E-01	17. 1

●911190 <u>6</u> 5 QY	RF	LEAD				4 th irroduction 12/19/179 Reinadjation
SÁMPLE	SAM.	шт.		%-COPPER .	%-ANTIMONY	Reinadianon X-ARSENIC
5626D 5626F 5626F	9268. 10383. 11142.	000	0.	07875 07480 07998	0.73750 < 0.71406 < 0.71188 <	0. 00487 0. 00450 0. 00443
•			0.	07784 AVG 002707 SD 476916 %RSD	0.72115 AVG 0.014200 SD 1.969095 %RSD	0. 00000 AVG 0. 000000 SD 0. 000000 MRSD
S604D S604E S604F	7500. 8555. 9037.	999	0	. 01339 . 00676 . 00339	1. 74046 1. 76665 1. 64853	0. 12291 0. 10515 0. 09061
•			Ø.	. 00676 AVG . 000000 SD . 000000 XRSD	1.71855 AVG 0.062036 SD 3.609803 %RSD	0.10622 AVG 0.016174 SD 15.227002 XRSD
0225A 0225B 0225C 0225C 0225E 0225F 0225H 0225H 0225K 0225K 0225K 0225M 0225M 0225M 0225M 0225M 0225M 0225M	10289. 11117. 11304. 7635. 13545. 9443. 11742. 9156. 9361. 11008. 8062. 8081. 11447. 9414. 9191. 8375. 10157. 9949. 12870.	0000 0000 0000 0000 0000 0000 0000 0000 0000	26629999999999999999999999999999999999	. 01079 . 01257 . 01580 . 01572 . 01209 . 01190 . 01228 . 01268 . 01385 . 01706 . 01706 . 01383 . 01383 . 01270 . 01365 . 01768 . 01768 . 01768 . 01768 . 01768 . 01768	1. 13211 0. 68451 0. 64872 2. 78725 1. 00443 1. 08623 0. 69168 0. 68320 0. 61400 0. 71117 1. 01500 4. 66406 0. 76131 1. 07756 0. 61885 0. 71702 0. 60755 1. 44718 0. 69794 0. 64654 1. 11482 AVG 0. 970360 SD 87. 042191 WRSD	0. 37415 0. 19507 0. 17916 0. 83364 0. 29215 0. 31598 0. 20429 0. 20478 0. 17426 0. 19463 0. 30067 1. 36977 0. 21538 0. 31316 0. 17381 0. 20387 0. 18207 0. 42973 0. 20940 0. 19122 0. 32741 AVG 0. 287979 SD 87. 956863 MRSD
• 0302A 0302B 0302C 0302E 0302E 0302F 0302H 0302I 0302I 0302I 0302N 0302M 0302M 0302P 0302P	11193. 10197. 6789. 8867. 9487. 9103. 8228. 7845. 12103. 12074. 10306. 11616.	0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 00000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 00000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 00000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 00000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000 < 0000		. 00231 . 00281 . 00293 . 00321 . 00304 . 00257 . 00274 . 00239 . 00239 . 00278 . 00257 . 00257	0.57015 0.75604 0.54420 0.81395 0.78074 0.54189 0.55108 0.77066 0.56677 0.56734 0.71687 0.55206 0.55597 0.56556	0. 12606 0. 17229 0. 12041 0. 18863 0. 18067 0. 11143 0. 11416 0. 16897 0. 11184 0. 12127 0. 15646 0. 12142 0. 12664 0. 12883 0. 12448 0. 10634

● 0302R ● 0302S	13426.000 9244.000	0. 00321 0. 00319	0. 0. 000 0. 55698 0. 70 <u>95</u> 1	0. 14330 0. 11572 0. 15074
0302T *	11534. 000	0. 00304 0. 00272 AVG	0.71 <b>()</b> ; 0.63886 AVG	0. 17075 0. 13703 AVG
•		0. 001599 SD 58. 706249 %RSD	0.093221 SD 14.591758 %RSD	0.026971 SD 19.682447 %RSD
● 0291A1 ● 0291A2 0291A3	12499. 000 15826. 000 8756. 000	0. 07148 0. 07011 0. 07090	0.56798	0. 00413 0. 00362 0. 00495
•		0.07083 AVG 0.000688 SD 0.971260 %RSD	0.57616 AVG 0.009526 SD 1.653351 XRSD	0. 00000 AVG 0. 000000 SD 0. 000000 XRSD
● 029181 ● 029182 029183	13440. 000 14726. 000 9441. 000	0. 07878 0. 07869 0. 07222	0.57353	0.00414 0.00404 0.00461,
•		0.07656 AVG 0.003759 SD 4.909428 %RSD	0.56695 AVG 0.019759 SD 3.485182 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 029101 ● 029102 029103	14763. 000 8840. 000 12373. 000	0. 05480 0. 06192 0. 05907	0.71615	9. 00445 0. 00527 0. 00450
•		0.05860 AVG 0.003583 SD 6.114632 %RSD	0.70464 AVG 0.010650 SD 1.511481 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
● 0291D1 ● 0291D2 0291D3	10756.000 16584.000 14907.000	0. 07059 0. 07568 0. 06529	0. 67079 0. 80671 0. 67883	0. 00860 0. 01446 0. 00700
•		0.07052 AVG 0.005195 SD 7.366718 %RSD	0.71878 AVG 0.076259 SD 10.609553 %RSD	0.01002 AVG 0.003926 SD 39.180477 %RSD
● 0291E1 ● 0291E2 0291E3	16118.000 10390.000 13367.000	0. 06380 0. 06043 0. 06606	0. 65242 0. 65891	0. 00384 0. 00549 0. 00630
•		0.06343 AVG 0.002835 SD 4.468955 %RSD	0.66121 AVG 0.010126 SD 1.531494 %RSD	0.00507 AVG 0.001792 SD 35.356819 %RSD
● 0291F1 ● 0291F2 0291F3	8801. 000 10838. 000 13483. 000	0. 06531 0. 06429 0. 06356	0.75141	0. 00567 0. 00521 0. 00462
•		0.06439 AVG 0.000881 SD 1.368083 %RSD	0.71224 AVG 0.033955 SD 4.767387 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 0291G1 ● 0291G2 0294G3	13510.000 8610.000 2962.000	0. 08798 0. 08315 <u>0. 0807</u> 7	0.56236	0.00435 0.00522

majore out or a velue,	· Section book of the Section		ರು. ಮದ್ದಾರವರು	8. 88J43
•		0.08383 AVG 0.003849 SD 4.591082 %RSD	0.54866 AVG 0.01 <b>5</b> 24 SD 3.522066 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 0291H1 ● 0291H2 0291H3	11589. 000 10350. 000 9178. 000	0.07989 0.08511 0.07922	0.58354 < 0.58854 < 0.56616 <	0.00470 0.00509 0.00513
•		0.08141 AVG 0.003224 SD 3.960277 %KSD	0.57941 AVG 0.011746 SD 2.027190 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
● 029111 ● 029112 029113	13041. 000 11122. 000 12805. 000	0. 08216 0. 08464 0. 08302	0.54951	0.00431 0.00456 0.00436
•		0.08327 AVG 0.001259 SD 1.511782 %RSD	0.54873 AVG 0.005748 SD 1.047509 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 5626G ● 5626H 5626I	9395. 000 7786. 000 9322. 000	0.07919 0.08519 0.08376	0.71423	0.00565 0.00643 0.00588
•		0.08271 AVG 0.003136 SD 3.791159 %RSD	0.71522 AVG 0.005860 SD 0.819277 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
•				
•				•

(TI)TITLE: 91119065 QY RF LEAD (LN)LIBRARY: (SA)SAMPLE TIME: 8JAN80 1048:00 (SE)STD ENERGY TOLFRANCE: (UE)UNK ENERGY TOLERANCE: 2. 00 (TF)THERMAL FLUX: 0.0000E-01 (EF)EPITHERMAL FLUX: 0.0000E-01 (FF)FAST FLUX: 0.0000E-01 (QU)UNITS: UG ELÉMENT ENFRGY HALF-LIFE SEC %--COPPER 511.00 1.2800E 01 H 4.6080E 04 564.09 2.7200E 00 D X-ANTIMONY 2. 3501E 05 657.41 2.6300E 01 H 9.4680E 04 %--ARSENIC STANDARD SAMPLES NAME MASS FILE POWER ACT TIME 100.0 1.00000.0 1 S626D 9268.00 FBI1 . A01 2 S626E 10383.00 FB11 .A02 100.0 100000.0 3 5626F 11142.00 FB11 . A03 100.0 1.00000.0 S604D 7500.00 FB11 .A04 100.0 100000.0 5 S604E 8555.00 FBI1 .A05 100.0 1.00000.0 S604F 9037.00 FBI1 . A06 100.0 100000.0 STD: 1. S626D FILE= FB14 . A01 ELEMENT ENERGY CONC ERROR %--COPPER 511.00 7.8000E-02 0.0000E-01 X-ANTIMONY 564.09 7.2000E-01 0.0000E-01. W-ARSENIC 657. 41 0.0000F-01 0.0000E-01 STD: 2 S626E FILE= FBI1 . A02 ELEMENT ENERGY CONC ERROR 511.00 7.8000F-02 0.0000E-01 X--COPPER 2 564.09 7.2000F-01 0.0000E-01 Y-ANTIMONY %-ARSENIC 657, 41. 0.0000E-01 0.0000E-01 STD: 3 S626F FILE= FBI1 . A03 **ELEMENT** ENERGY CONC FRROR %--COPPER 511. 00 7.8000E-02 0.0000E-01 X-ANTIMONY 564. 09 7. 2000E-01 0. 0000E-01 W-ARSENIC 657. 41 0.0000E-01 0.0000E-01 STD: 4 5604D F1LE= FB11 . A04 ELEMENT ENERGY CONC ERROR %-COPPER 511.00 0.0000E-01 0.0000E-01 X-ANTIMONY 564.09 0.0000E-01.0.0000E-01 %--ARSENIC 657, 41 1.0000E-01.0.0000E-01

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STD:

<u>5 SEAAF</u>

ENERGY CONC: ERROR 511. © 0.0000E-01 0.0000E-01 564.09 0.0000E-01 0.0000E-01 657.41 1.0000E-01 0.0000E-01 ELEMENT W-COPPER %-ANTIMONY %-ARSENIC STD: 6 S604F FILE= FB11. . A06 ELEMENT FNERGY CONC ERROR 511.00 0.0000F-01 0.0000E-01 564.09 0.0000E-01 0.0000E-01 657.41 1.0000E-01 0.0000E-01 X-COPPER X-ANTIMONY 3 %-ARSENIC UNKNOWN SAMPLES MAME S626D 1 2 5626E S626F S604D 5 5604E S604F Q225A 8 02258 9 Q225C 10 Q225D 11 Q225E 12 Q225F 13 Q225G 14 Q225H 15 Q225I 16 Q225J 17 Q225K 18 Q225L 19 Q225M 20 Q225N 21 02250 Q225P 22 23 Q225Q 24 Q225R 25 02255 26 Q2525T 27 W302A 28 Q302B 29 Q302C 30 Q302D 31 Q302E 32 0302F 33 Q302G Q302H 34 35 03021 36 0302J 37 Q302K 38 Q302L 39 Q302M 40 Q302N 41 03020 42 0302P 43 03020 44 Q302R 45 03025 46 Q302T 47 Q291A1 48 0094B0

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	49	0291A3	8756. 09			100.	9 1	00000.	Ø	
	50	Q291B1	13440. 00	FBI1	. A50	199. 1	9 1	0000Q.	0	
	51	Q291B2	14 6. 00	FB11	. A51	100.	e 📢	19999.	Ø	
-	52	Q291B3	9441.00	) FB11	. H52		9 1	00000.	Ø	
	53	0291C1		) FB11				00000.		
	54	029102	8840. 00	FBI1				0000g.		
_	55	Q291C3	12373.00	9 FB11				00000.	e e	
	56		10756. 00					00000.		
	57	0291D2	16584.00	9 FB11	. A57			99999.		
_	58	0291D3	14907.00	FBI1	. A58			00000.		
	59		16118. 09					00000.	•••	
	60	Q291E2	10390.00					00000.		
_	61	0291E3	13367.00	FRI1	. A61			00000.		
	62		8801. 09					00000.		
	63	Q291F2	10838.00	) FB11	. A63			00000		
_	64	Q291F3	13483.00	9 FB11	. A64			99999.		
-	65		13510.00					99999.		
	66	Q291G2	8610. 00					00000.		
_	67	0291G3	7862. 09	FBI1	. A67			99999.		
	68		11589. 00					99999.		
	69	Q291H2	10350.00					00000.	Ø	
_	70	Q291H3	9178. 00	FBI1	. A70			00000.	Ø	
	71	029111	13041.00	9 FB11				00000.		
	72	029112	11122.00	9 FB11				00000		
_	73	029113	12805.00	) FB11				00000.	==	
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لريج \*\*\*\* 10 1 1980 11:52:08 AM \*\*\*\* 91119065 QY RF L.E.AD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S626D TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9268, 000 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: FFF. TABIL ACQUISITION DATE: 9JAN80 1028:37 \* FWHM(1332) 2. 390 PRESET TIME(LIVE.): 600. SEC \* SENS171V1TY: 5. 000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :+: DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4: ENERGY WINDOW 499.787 TO 674. 920 PK IT ENERGY AREA **BKGND** FWHM CHRNNEL LEFT PW CTS/SEC MERR FIT 1 1 511.08 9276. 4313. 2.89 1022.58 1.012 23 1.546E 01 1. 4 2. 51E 2 1. 564. 24 140517. 5238. 1.96 1128.82 1120 0.3 1.66E 18 2.342E 02 3 1. 602, 89 7961. 955. 2.03 1206.05 1196 20 1.327F 01 1.2 6.14E 00 4 1. 646. 10 529. 1.95 856. 1292.40 1283 25 8.809E-01 9.0 1.50E 1. 668.65 196. 358. 3.00 1337, 47 1334 11 3.267E-01 15.4 5.48E

PEAK SEARCH COMPLETED

### STANDARD REPORT:

	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
_					(1 SIGMA)		(1 SIGMA)
T	X-COPPER	511. Ø	9276.	7.8000E-02	0. 0000E-01	7. 7425E02	1. 1167E-03
	X-ANTIMONY	564. 1	1.40517.	7. 2000E-01	0. 0000E-01	4. 5166E-02	1 2490E-04
	X-ARSENIC	657. 4	Ø.	0.0000E-01.	0.0000E-01	0. 0000E-01	0.0000E-01

\*\*\*\*\*\*\* 10 3 1980 11:53:17 AM \*\*\*\* 91119065 QY RF LEAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S626F TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 10383.00 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. THB1 \* ACQUISITION DATE: 9JAN80 1039:08 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :†: DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% ENERGY WINDOW 499.787 10 674. 920 PK IT ENERGY AREA BKGMD FWHM CHANNEL LEFT PW CTS/SEC MERR 1 1 511.06 9778. 6600. 2.88 1022.53 1013 30 1.630E 01. 1.. 6 2. 37E 2 1 564. 23 152136. 6300. 1.96 1128.80 1120 21 2.536E 02 0.3 1.41E 3 :1. 602.90 8625. 1337. 2. 91. 1206.06 1194 22 1.437F 01. 1. 2 4. 54E 00 1 646.08 662. 490. 2.45 1.292. 36 1284 14 1.104E 00 6. 1. 4. 07E PEAK SEARCH COMPLETED

# STANDARD REPORT:

•	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
	%-COPPER	511. 0	9778.	7. 8000E-02		7. 3546E-02	
•	72-ANTIMONY 2-ARSENIC	564. 1 657. 4		7. 2000E-01 0. 0000E-01.			

10 🚅 \*\*\*\*\* 1980 11:54:23 AM \*\*\* 91119065 QY RF L.EAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 5626F TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 11142.00 UNITS: UG SAMPLE GEOMETRY: .25 1N EFFICIENCY FILE NAME: FFF. YAB1. ACQUISITION DATE: 9JAN80 1049:42 \* FWHM(1332) 2.390PRESET TIME(LIVE): 600. SE.C: \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: DETECTOR: GFL 1-8 \* L1BRARY: NUCL, L,IB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% ENERGY WINDOW 499.787 TO 674, 920 PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC: ZERR 511.08 1 1 11114. 508K. 2.84 1022.57 1013 23 1.852E 01 1. 3 2. 26E 2 2 560.14 1710. 1347. 2. 22 1120.62 1.107 39 2.850E 00 3. 9 9. 76E 3 2 564. 23 162455. 1013. 1.97 1128.80 1107 39 2.708E 02 0.2 1 602.91 9086. 1.415. 1.99 1206.09 1194 23 1.514E 01 1.. 2 7. 33E 5 1 646, 10 509. 816. 1.86 1292.41 1282 17 8.484E-01. 9. 1 2. 94E PEAK SEARCH COMPLETED

#### STANDARD REPORT:

	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
	•				(1 SIGMA)		(1 SIGMA)
W.	%-COMPER	511. 0	11114.	7.8000E-02	0. 0000E-01	7.8641E-02	1 0322E-03
	Y-ANTIMONY	564. 1	162455.	7. 2000E-01	0.0000E-01	4. 3598E-02	1.0884E-04
	%-ARSENIC	657. 4	Ø.	0. 0000E-01	0.0000E-01	0. 0000E-01	0. 0000E-01

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\*\*\*\*\* 10 J 1980 11:55:24 AM \*\*\* 91119065 QY RF LEAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S604D TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 7500,000 UNITS: LIG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 \* ACQUISITION DATE: 10JAN80 851:56 \* FWHM(1332)2.398 PRESET TIME(LIVE): 5.000 699. SEC \* SENSITIVITY: ELAPSED REAL TIME: 393. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 374. SEC \* NBR ITERATIONS: 10. :4: DETECTOR: GEL1-8 \* LIBRARY: NUCL, L181 DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4: EMERGY WINDOW 499.787 TO 674, 920 PK IT ENERGY AREA BKGMD FWHM CHANNEL LEFT PW CTS/SEC ZERR FIT 559.43 1 3 7726. 1738. 2.41 1119.19 1110 38 2.066E 01 1.4 5.30E 2 3 564.26 131933. 1114. 1.97 1128.84 1110 38 3.528E 02 0.3 3 1. 602, 92 9282. 1160. 1.99 1206.12 1195 20 2.482F 01 1. 2 6. 23E 00 1 646.03 2. 20 642. 514. 1292.27 1286 13 1.717E 00 6. 4 2. 11E 1 657, 25 779. 488. 2.34 1314.69 1306 16 2.083F 00 5. 4 3. 32E

PEAK SEARCH COMPLETED

#### \_STANDARD\_REPORT:

	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
_					(1 SlGMA)		(1 SIGMA)
-	X-COPPER	511. 0	0.	0.0000F-01	0.0000E-01	0.0000E-01	0. 0000E-01
	X-ANTIMONY	564. 1	0.	0.0000E-01	0.0000E-01	0. 0000E-01	0.0000E-01
	%-ARSENIC	657. 4	779.	1.0000E-01	0. 0000E-01	9.3647E-03	5. 0351E-04

10 J \*\*\*\*\*\* 1980 11:56:27 AM 91119065 QY RF LEAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 5604E TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8555.000 UNITS: UG SAMPLE GEOMETRY: . 25 1N EFFICIENCY FILE NAME: EFF. 1AB1 ACQUISITION DATE: 9JAN80 1111:06 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: :4: DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00% ENERGY WINDOW 499.787 TO 674. 920 PK IT ENERGY HREA BKGND FWHM CHANNEL LEFT PW CTS/SEC **XERR** FIT 1 1. 510.97 708. 5352. 2.72 1.022.35 1016 12 1.179E 00 15.1 2.05E 2 24299. 2 559.33 3405. 0.7 1.34E 2.31 1119.00 1108 34 4.050E 01 3 2 564. 22 308371. 2546. 1.98 1128.76 1108 34 5.140E 02 0.2 4 1 602.88 17488. 3102. 2.00 1.206. 04 1.195 19 2.915E 01 0. 9 1. 05E 1. 645.93 1.080. 1874. 1.96 1292.06 1282 17 1.800E 00 6. 4 1. 23E

PEAK SEARCH COMPLETED

2158.

2427.

657.26

# STANDARD REPORT:

1.

-	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
					(d. SIGMA)		(1 SIGMA)
	%-COPPER	511.0	0.	0. 0000E-01	0. 0000E-01	0. 0000E-01.	0.0000E-01
_	%-ANTIMONY	564. 1.	0.	0. 0000E-01.	0. 0000E-01	0.0000E-01	0. 0000H-01
	%-ARSENIC	657. 4	2158.	1.0000E-01	0. 0000E-01	8. 0115E-03	3. 1087E-04

2.05

1314.72 1307

23 3.596E 00

3.9 4.51.E 00

\*\*\*\*\*\* 10 3 1980 11:57:32 AM \*\*\*\*\*\* 91119065 QY RF LEAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 5604F TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9037, 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 9JAN80 1122:00 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :4: DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4: ENERGY WINDOW 499.787 10 674, 920 PK IT ENERGY HREA BKGND FWHM CHANNEL LEFT PW CTS/SEC **ZERR** FIT 559.34 1 3 24374. 3686. 2.35 1119.02 1108 33 4.062E 01 0.7 1.46E 2 3 564, 22 303379. 2473. 1.99 1128.77 1108 33 5.056E 02 0.2 3 1. 602.88 1.7505. 2935. 2.02 1206.03 1194 21 2.917E 01 0.9 8.03E 00 1. 646.05 1043. 1700. 1.97 1292.31 1285 16 1.738E 00 6. 4 8. 90E-0 1. 657.25 1955. 1644. 1.96 1314.69 1307 16 3.258E.00 3. 7 1. 47E PEAK SEARCH COMPLETED

# STANDARD REPORT:

	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
_	F				(1. SIGMA)		(1 SIGMA)
-	%-COPPER	511. 0	0.	0.0000E-01	0.0000E-01	0. 0000E-01	0. 0000E-01
	%-AMTIMONY	564. 1	0.	0. 0000E-01	0. 0000E-01	0.0000F-01	0.0000E-01
	%-ARSENIC	657. 4	1.955.	1.0000E-01	0. 0000E-01	6. 9040E-03	2. 5572E-04

# SUMMARY OF STANDARD CONSTANTS:

1. ELEMEN	T %-COPPER	Al	511. 00	a KEV
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STANDARD NAME	CONCENTR.	CONSTANT	ERROR (4 STGMB)
S626D S626E S626F	7. 8000E-02 7. 8000E-02 7. 8000E-02	7. 7425E-02 7. 3546E-02 7. 8641E-02	1. 1167E-03 1. 1401E-03 1. 0322E-03
MEAN CONSTANT.	3 STDS:	 7 6691F-02	6 3423F-04

# 2. ELEMENT %-ANTIMONY AT 564.09 KEY

STANDARD NAME	CONCENTR.	COMSTANT	ERROR
			(1 SIGMA)
S626D	7. 2000E-01.	4.5166E-02	1. 2490E-04
5626E	7. 2000E-01	4.3731E-02	1. 1667E04
5626F	7. 2000E-01	4.3598E-02	1.0884E-04
MEAN CONSTANT,	3 STDS:	4.4095F-02	6.7118E-05

# 3. ELEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604D S604E S604F	1. 0000E-01 1. 0000E-01 1. 0000E-01	9.3647E-03 8.0115E-03 6.9040E-03	5. 0351E-04 3. 1087E-04 2. 5572E-04
MEAN CONSTANT,	3 STDS:	7. 6194E-03	1. 8385E-04

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S626D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9268.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

+:

### ACQUISITION DATE: 9JAN80 1028:37 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:+:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

ere

\*

ELEMENT E	ENERGY I	BKGND I	HREA	CONCEN		1 SIGMA ERROR	%ERROR
● %-COPPER %-ANTIMONY _ %-ARSENIC	511. 1 564. 2 657. 4	5238. 1.4		0. 737	5		Ø. 3
	211. 1: 760. 10		202. 1684.	194. 1668.	252. 1469.	292. 1138.	369. 729.
<ul> <li>1117: 378.</li> <li>1126: 9024. :</li> <li>1135: 119.</li> </ul>	18940. 293;	71. 508. 27. 34021. 36. 99.	27517.	14047.	4002.	785.	165.
1310: 40. 1319: 41.	24. 34. 35. LSE-PILE-U	38. 52. 34. 34.	53. 37.	56. 22.	50. 39.	45. 34.	29.
PK IT ENERG						W CTSZ	SEC XERR
1 1, 511, 0; 2 1 564, 2; 3 1 602, 8; 4 1, 646, 1; 5 1 668, 6;	4 140517. 9 7961. 0 529.	4313. 5238. 955. 856. 358.	2.89 1.96 2.03 1.95 3.00	1,022, 58 1128, 82 1206, 05 1292, 40 1337, 47	1120 1196 1283	23 1.546 18 2.342 20 1.327 25 8.809	E 02 0.3 E 01 1.2

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S626E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10383.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 9JAN80 1039:08 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1788ATJONS: 10.

:+:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 2600179 1434:06 \* ENERGY TOLERANCE: 2.000KV

:4:

● ELEMENT	PEAK ENERGY	BKGND	AKEA	CONCENTR	1 SIGMA : ERROR	ZERROR
<ul><li>%-COFFFR</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	564. 2	6300. 15	9778. 2136. 0. <	0. 71.41	0.0013 0.0022 NOT DE	9.3
1009: 214. 1018: 483. 1027: 491.	811. 11	57. 240. 57. 1528. 78. 207.	231. 1809. 222.	1780. 1	263. 313. 577. 1209. 181. 187.	390. 771. 188.
<ul> <li>1117: 419.</li> <li>1126: 9946.</li> <li>1135: 139.</li> </ul>	20799. 319	01. 524. 16. 37011. 11. 98.			765. 1389. 485. 832. 83. 99.	3777. 196. 99.
1310: 33. 1319: 45.	30. 36. 34. ULSE-P1LE-U	43. 53. 43. 4 <u>1</u> .	55. 31.	56. 27.	45. 49.	
PK IT ENER	GY AREA	BKGND	FЫНМ	CHANNEL LE	FT PW CTS	:/SEC %ERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	23 152136. 90 8625.	6600. 6300. 1337. 490.	1.96	1022, 53 10 1128, 80 11 1206, 06 11 1292, 36 12	.20 21 2 53 94 22 1 43	6E 02 0.3 7E 01 1.2

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 5626F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11142.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

:1:

ACQUISITION DATE: 9JAN80 1049:42 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

\*

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5937283 KEV \* ABUNDANCE LIMIT: 85.00%

● ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCENT		SIGMA RROR	ZERROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>	511. 1 564. 2 657. 4	1013.	162455.	0. 7119	Θ.	.0012 .0021 OT DETECT	0. I
<b>1</b> 018: 618.	236. 874. 1 383.	.267. 171	8. 2021.		<b>1779</b> . :	1299. 8	116. 399. 198.
• 1117: 429. 1126:10547. 1135: 150.	21863. 33		3. 31494.	609. 15699. 93.	4501.	867.	
1310: 31. 1319: 49.	36. 34. 35. ULSE—P1LE—	52. 5 41. 4	5. 60. 0. 34.	77. 45.	57. 31.	43.	35. 52. 42.
PK IT ENER		I BKGND		CHANNEL L		•	: XERR
1 1 511. 2 2 560. 3 2 564. 4 1 602. 5 1 646.	14 1718 23 162455 91 9086	). 1347 6. 1013 6. 1415	. 2.22 . 1.97 . 1.99	1022.57 1 1120.62 1 1128.80 1 1206.09 1 1292.41 1	107 39 107 39 194 23	2. 708E 0	90 3.9 32 0.2 31 1.2

91119065 QY KF

LEAD

SAMPLE DATE: 8JAM80 1048:00 SAMPLE IDENTIFICATION: 5604D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7500.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE WAME: EFF. 1AB1

:+:

ACQUISITION DATE: 10JAN80 851:56 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 393. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 374. SEC \* NBR 17ERATIONS: 10.

4:

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DETECTOR: GEL1-8

DETECTOR: GEL1-8 \* L1BRARY:NUCL.L1B1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2.000KY

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KFV \* ABUNDANCE LIMIT: 85.00%

ELEMENT	PEAK ENERGY	BKGI	4D	AKEA	COMCE		1 SIGMA ERROR	XEF	RROR
%-COPPER	511.0	25:	41	Ø. <	: 0.01:	3 <b>4</b>	NOT DET	ECTABL	.E.
%-ANTIMONY %-ARSENIC	564. % 657. 3	11: 40	14. 13: 38.	1933. 779.			0. 0055 0. 0072		
1009: 171.						184.	186.	192.	
1018: 184.	210.	192.	207.	202.	240.	19R.	201.	194.	
1027: 149.	191.	1.79.	169.	157.	175.	187.	170.	189.	
1117: 1038.	1507.	1753.	1598.	1044.	611.	647.	1117.	2960.	
1126: 8269.	17383. °	27126.	31943.	25909.	13376.	4219.	814	216	
1135: 116.		1.20.					89.		
1301: 33.	격략.	40.	36.	36	*21	738	40	33.	
1310: 52	60.	103	121	159	202	165	77	46.	
1319: 39.	Ж9.	26	99	41	76	28	 दां व	29.	
þ	ULSE-P1L	E-UP C	ORRECTE	D DATĀ.	CORRECT	110W =	1.000	Errac's	
PK IT ENER	GY AR	EA I	BKGND	FЫНМ	CHAMMEL.	LEFT P	W CTS/	SEC	ZERR
1 3 559.	43 77	26.	1738.	2. 41	1119.19	1110	38 2. 066	F 04	1. 4
2 3 564. 3 1 602.		33.		1. 97	1128.84		38 3.528		Ø. 3
3 1 602.	92 92	82.	1160.	1. 99	1206.12		20 2. 482		1. 2
4 1 646.			514.		1292.27		13 1.717		6. 4
5 1 657.	25 7	79.	488.		1314.69		16 2.083		5. 4

91119065 GY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S604E

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 8555.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 9JAN80 1111:06 \* FWHM(1332) 2.390
PRESET TIME(11VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 643. SFC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

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:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 2600179 1434:06 \* ENFRGY 10LERANCE: 2.000KV

:+:

• ELEMENT	PEAK ENERGY	BKGND	F	IREH	CONCEN	ИК.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 2 657. 3	5352 2546 2427	. Bee	708. 371. 158.		i7'	0. 0010 0. 0042 0. 0048	15. 1 8. 2 4. 6
1009: 489. 1018: 476. 1027: 449.	489.	471. 496. 417.		452. 574. 397.	589.	480. 518. 433.	471.	481. 498. 417.
<ul> <li>1117: 3253</li> <li>1126:20676</li> <li>1135: 426</li> </ul>	42880. (		4675. 3666. 312.	2934. 58599. 279.	1.654. 29265. 279.	1581 8676. 274.	2759. 1832. 277.	7599. 574. 261.
• 1301: 106 1310: 132 1319: 96	135. 93.	86.	394. 96.	561. 106.	87.	109. 518. 91.	293. 106.	92. 167. 81.
PK IT ENE	PULSE—P1L! RGY AR!			) БАТА. БИНМ	CORRECT CHANNEL			SEC: XERR
1 1 510 2 2 559 3 2 564 4 1 602 5 1 645 6 1 657	.33 242 .22 3083 .88 174 .93 10	99. 3 71. 2 88. 3 80. 1	546. 102.	2. 72 2. 31 1. 98 2. 00 1. 96 2. 05	1022.35 1119.00 1128.76 1206.04 1292.06 1314.72	1108 1108 1195	12 1. 1798 34 4. 0508 34 5. 1408 19 2. 9158 17 1. 8008 23 3. 5968	E 01 0.7 E 02 0.2 E 01 0.9 E 00 6.4

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 5604F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9037.000 UNITS: UG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. TAB1

+:

ACQUISITION DATE: 9JAN80 1122:00 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4.

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

:4:

ELEMENT	PEAK ENERGY E	KGND	AREA	CONCENT		1 SIGMA ERROR	ZER!	ROR 
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	2473. 30	3379.	1. 6485	5	0.0039	1	0. 2
1018: 437.	460. 50 486. 50 425. 39	8. 508.	553.	554.	513.		452.	
1126:20469.	4816. 546 41726. 6329 312. 34	3. 72070.	57953.	28879.	8750.		7629. 542. 261.	
1310: 100. 1319: 106.	116. 8 176. 23 103. 9 ULSE-P1LE-UF	8. 354. 9. 91.	545. 94.	568. 80.	451. 96.	266. 98.	104. 163. 115.	
PK IT ENER	GY AREA	BKGND	FWHM	CHANNEL I	LEFT F	M CTSZ	SEC:	ZERR
1 3 559. 2 3 564. 3 1 602. 4 1 646. 5 1 657.	22 303379. 88 17505. 05 1043.	2473. 2935.		1119.02 : 1128.77 : 1206.03 : 1292.31 : 1314.69 :	1.108 1.194 1.285	33 4.062 33 5.056 21 2.917 16 1.738 16 3.258	2 02 2 01 2 00	0. 7 0. 2 0. 9 6. 4 3. 7

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0225A

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 10289.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABS

:†:

### ACQUISITION DATE: 9JAN80 1132:55 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 645. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR TIERATIONS: 10.

:+:

\*

:+:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

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1

657, 25

665, 59

91.46.

527.

2819.

1494.

• ELEMENT	PEAK ENERGY	BKGND	HREA	CONCENT		SIGMA RROR	XERROR
<ul><li>%-coffer</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	564. 2	6253. 2719. 2 2819.	36749.	1. 1321	9	. 0029	0.3
<b>1018:</b> 513.	540.	438. 502 593. 614 485. 443	. 675.	643.	586.	660.	503. 529. 432.
• 1117:12030. 1126:16236. 1135: 406.	33237. 50		. 9391. . 44535. . 325.	22561.	6859.	1438.	6081 551. 323.
1310: 228. 1319: 177.	410. 153.	145. 1.46 812. 1425 131. 126 UP CORRECT	. 2053. . 105.	2224. 106.	1.809. 134.	925.	168. 359. 112.
PK IT ENER			- ынт	CHANNEL L			EC ZERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 646.	25 68757 21 236749 88 13207	. 3144. 2719. . 3507.	1.99	1023.08 1 1118.83 1 1128.74 1 1206.02 1 1292.22 1	107 35 107 35 196 21	2. 219E 1. 479E 3. 946E 2. 201E 1. 567E	02 0.3 02 0.2 01 1.1

2.03

1.95

1314.68 1305

21 1.524E 01

1331.35 1326 12 8.785E-01 11.2

1.3

91119065 QY RF

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 02258

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11117.00 UNITS: UG

LEAD

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

:+:

ACQUISITION DATE: 9JAN80 1143:53 \* FWHM(13%2) 2.790
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GEL1-8 \* L1BRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

1

665.44

296.

767.

1.95

1331.05 1326 11 4.940E-01 14.4

ELEMENT	PEAK ENERGY	BKG!	IE)	AREA	CONCE		1 SIGMA ERROR	ZEF	ROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	1.48	37. 15 <sub>'</sub>	4369.	Ø. 684	15	0. 0008 0. 0020 0. 0058		6. 1 0. 3 3. 0
1009: 286. 1018: 342. 1027: 327.	370.	457.	510.	527.	562.	459.	288. 425. 250.	380.	
1117: 6664. 1126:10332. 1135: 181.	21276.		36732.	29380.	14872.		886.	260.	
1310: 109. 1319: 92.	224.	425. 89.	754. 60.	1215. 64.	1213. 56.	1006. 70.		91. 220. 69.	
	GY AR		8KGND				W CTS/	SEC	XERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 645. 6 1 657.	27 496 22 1543 89 86 98 6	56. 69. 54. 52.	1487.	2. 92 2. 03 1. 98 2. 00 2. 04 2. 01	1022. 41 1118. 87 1128. 77 1206. 05 1292. 17 1314. 69	1107 1107 1194 1286	15 2.765 35 8.276 35 2.573 20 1.442 13 1.087 22 8.547	E. 01 E. 02 E. 01. E. 00	6. 0 0. 5 0. 3 1. 3 7. 6 1. 8

\*\*\*\*\*\*\*\* 10 J 1980 12:08:29 PM \*\*\*\* \*\*\*\*\*\*\*\*\* 

91119065 QY RF LFAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225C

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 11304.00

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TAB1.

UNITS:

UG

ACQUISITION DATE: 9JAN80 1154:35 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 627. SEC SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL1-8 \* L1BRARY: NUCL. L 1B1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV

0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

•	ELEMENT	T 	PEAK ENERGY	BKGI	√D f	AREH	CONCE		I SIGMA ERROR	ZER!	ROR
•	N-COPPER X-ANTIMONY X-ARSENIC		564. 2 1.4		31. 148	2101. 3478. 4767.	0. 01: 0. 648 0. 17:	37	0. 0008 0. 0020 0. 0057	!	4. 9 0. 3 3. 2
•	1009: 1018: 1027:	270. 303. 281.	287. 410. 283.	306. 451 274.	278. 570. 257.	261. 533. 257.	250. 526. 276.	254. 519. 256.	276. 418. 268.	297. 395. 261.	
•	1117: 1126: 1135:		9727. 20057. 162.	11551 * 31048. 166.	9368. 35481. 153.	5284. 28578. 150.	1977. 1.4480. 157.	1033. 4261. 149.	1432. 924. 157.	3771. 249. 151.	
•	1301: 1310: 1319:	64. 106. 86. Pl	90. 221. 69. ULSE-PII	63. 393. 55. LE-UP CO	79. 733. 62. DRRECTEI	65. 1108. 48. DATA.	90. 1182. 72. CORRECT	82. 1003. 66. 110N =	72. 522. 63. 1. 000	94. 196. 62.	
_	PK IT	ENER	GY AI	REA E	3KGND	F ЫНМ	CHANNEL.	LEFT F	W CTS/	'SEC	ZERR

			100 1 1 100 1 1 1 10 1 1	11134-11	Eugen 4E	1 1111111111111111111111111111111111111	will finish.	L L 1 1	гм	widt der	ALL PARTS
	1	1.	510. 92	2101.	· 4072.	3. 26	1022, 26	1015	16	3.502E 00	4. 8
_	2	2	559. 27	47670.	1701.	2. 02	1118.87	1108	30	7. 945E 01	0.5
•	3	2	559. 27 564. 23	148478.	1401.	1. 98	1128. 79	1108	30	2. 475E 02	0. I
	4	1.	602. 88	8517.	2509.	1. 99	1206.03	1.197	26	1.419E 01	1.4
_	5	1	645. 96	540.	1068.	1. 90	1292. 13	1.286	14	8. 993F-01	9. 6
	6	:1.	657. 28	4767.	2579.	2.00	1.314. 74	1305	27	7.944E 00	2. 1
	7	:1.	665. 91	29.	1.063.	0. 62	1332.00	1331	13	4.843E-02	***

\*\*\*\*\* in i 1980 12:09:39 PM \*\*\*\* 

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7635. 000 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

\*

ACQUISITION DATE: 9JAN80 1205:14 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL, TIME: 680. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC 10.

\* NBR ITERATIONS:

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHML: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

665, 54

703.

3124.

					,					
ELEMENT		PEAK IERGY	BKG	ND I	AREA	CONCE	VT R.	1 SIGMA ERROR	ΧEI	ROR
%-COPPER		i10. 9	112	03. :	1397.	0. 01:	57	0. 0017	**************************************	11.1
%-ANTIMON' %-ARSENIC		64. 2 57. 2	59 47		0035. 4908.	2. 781 0. 831	72 36			0. 2 2. 6
					782.			870.	82 <i>6</i> .	
				1052. 850.	1128. 787.		1044. 783.		842. 793.	
1117:202		1794. 3	4776.	27992.	14811.	5912.	3214.	4947.	12498.	
1126:314: 1135: 10:			1866. 918.	100795. 794.	78904. 819.		12190. 818.		1373. 760.	
1301: 2	39.					300.				
1310: 4:	19.	651.	1397.	2492.	3512.	3631.	ers. 2944.	302. 1.632.	339. 640.	
1319: 3:		277. E-PILE	269. :-UP C	273. ORRECTEI	245. DATA.		265. = 10N		260.	
PK IT E	NERGY	ARE	:FI	BKGND	FWHM	CHANNEL.	LEFT F	PW CTS/	'SEC	%ERR
	LØ. 86	139		11203.	2. 69	1022. 12		13 2.328	3E 00 1	L1. 0
	59. 22 54. 18	14496 43003	•	6271.	2.02	1118.78		34 2.416		0. I
	92.86	45005 2444		5901. 7158.	2. 01 2. 04	1128.69 1205.99	1107 1197	34 7.167 19 4.074		0. 2 0. 8
5 1. 6	46. 01	152		5066.	2.05	1292. 22		17 2.543		0.8 7.1
6 1 6	57. 24	1490	18.	4743.	2. 02	1314.67		17 2.485		1. 0

1.. 74

1331. 26 1326

1.1 1.171.E 00 11.9

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0225E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 13545.00 UNITS: UG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 9JAN80 1216:49 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

:4:

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

UNKMOWN SAMPLE REPORT

665, 64

423.

1869.

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 3	8256. 3325. 2420.	1888. 274376. 9222.		0. 0025	7. 2 0. 2 2. 7
1009: 550. 1018: 592. 1027: 569.		687. 7	512. 549. 756. 845. 504. 491.	818. 766	5. 707.	576. 609. 473.
• 1117:12134. 1126:18851. 1135: 501.	38532. E	67610. 652	360. 9460. 206. 51716. 419. 374.	26021. 7976	s. 1839.	7170. 676. 404.
<b>1319: 178.</b>	381. 150.	822. 1. 154. :		2230. 181 <u>:</u> 145. 130	9. 1020. 3. 1,47.	198. 372. 146.
PK IT ENER				CHANNEL LEFT	PW CTS/S	SEC ZERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 645. 6 1 657.	25 8838 21 27437 86 1525 95 105	89. 37( °6. 33; 61. 41! 53. 25	55. 2.01 25. 1.99 55. 2.04 44. 2.38	1022.53 1014 1118.84 1108 1128.75 1108 1206.00 1194 1292.11 1295 1314.70 1306	16 3.1468 34 1.4738 34 4.5738 20 2.5428 16 1.7558	E 02 0.4 E 02 0.2 E 01 1.0 E 00 7.4

1. 56

1331.46 1327

12 7.052E-01 15.2

\*\*\*\*\*\* 10 J 1980 12:11:59 PM 

91119065 QY RF L.EAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9443.000 UNITS: LIG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 1227:51 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 637. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 2. 000KV KEY/CHNL:

0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

• ELEMENT	2 V 	PEA ENEA		BKG#	4E)	AREA	CONCE	NTR.		IGMA ROR	%E!	ROR
%-corpe %-antin %-arser	ሳርነነኝነ <sub>ት</sub> ነ		L. 1 J. 2 7. 3		32. 20	1.282. 6462. 6921.	1 08	19 62 60	Ø.	0010 0029 0090		8. 4 0. 3 2. 8
1009: 1018: 1027:	419. 423. 395.		27. 4	:78.  81.  80.		378. 571. 358.	612.	352. 534. 370.		385. 481. 336.	358. 451. 360.	
• 1117: 1126:1 1135:		2846		.17. )19. !43.	49448.	7073. 39397. 229.	19629.	1525. 6032. 236.	1	055. 257. 228.	5360. 420. 237.	
• 1301: 1310: • 1319:	158. 131.	3E 2	)9. 5 )2.	i74. 87.	1087. 101.	112. 1510. 108. D DATA.	1756. 90.	112. 1357. 103. TloN =		108. 757. 110. 000	124. 292. 1.00.	
• PK 1T	ENER	GY	AREA	E	8KGND	FWHM	CHANNEL	LEFT F	·Μ	CTS/S	SEC	%ERR
1 1 2 2 3 2 4 1 5 1 6 1 7 1	511. 559. 564. 602. 646. 657. 665.	26 22 2 89 06 27	1282. 67131. 206462. 12326. 897. 6921. 422.		5170. 2595. 2182. 2484. 1583. 1823.	2.80 2.01 1.98 1.99 2.34 2.02 1.88	1022. 53 1118. 86 1129. 77 1206. 04 1292. 33 1314. 73 1331. 57	1107 1107 1196 1284 1306	35 35 18 15 17	2. 1376 1. 1196 3. 4416 2. 0546 1. 4966 1. 1536 7. 0416	02 02 01 00 00	8. 4 0. 4 0. 2 1. 1 7. 1 1. 5

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11742.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+

ACQUISITION DATE: 9JAN80 1238:41 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KY

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

1. 665, 42

294.

981..

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT	1 R. E	SIGMA RROR	XERROR
*-COPPER %-ANTIMONY %-ARSENIC	564. 2	4286. 1843. 16 1099.	53164.	0. 691.7	9	. 0020	Ø. 3
1009: 267. 1018: 380. 1027: 310.	384.	450. 50 <u>1</u> .	552.	519.	489.	451.	327. 375. 249.
• 1117: 7218, 1126:10826, 1135: 216,	2231.0. 34	189. 39276.	31216.	15817.	4618.	1014.	204. 284. 172.
<b>1319</b> : 96.	210. 63.	452. 848.	1218. 75.	1289. 75.	1.088. <b>61</b> .	631. 74.	112. 254. 63.
PK IT ENER	GY AREA	BKGND	FWHM	CHANNEL L	EFT PW	CTS/SE	C ZERR
<ul><li>2 2 559.</li><li>3 2 564.</li></ul>	27 52747 23 163164	. 4286. . 2409. . 1843.	1. 99 1. 98	1022.50 1 1118.87 1 1128.78 1	110 32	5 2. 716E 2 8. 791E 2 2. 719E	01 0.5
4 1 602. 5 1 645. 6 1 657.	99 703 28 5538	. 1928. . 987. . 1099.	2. 13	1206.09 1 1292.18 1 1314.75 1	286 12	9 1. 599E 2 1. 171E 5 9. 229E	

2.14 1331.00 1326 12 4.905E-01 16.1

1 1980 12:14:19 PM \*\*\*\*\*\* 10 . \*\*\*\* \*\*\*\*\* 

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1.048:00 SAMPLE IDENTIFICATION: Q225H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9156, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 1249:24 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % 600. SEC ELAPSED LIVE TIME: \* NBR ITERATIONS:

\* LIBRARY: NUCL. LIB1

DETECTOR: GEL1-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803

\* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONC		1 SIGMA ERROR	XERROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	511. 1 564. 2 657. 3	1189.	1.25434	. 0.6	832	0. 0022	0. 3
1009: 270. 1018: 265. 1027: 234.	299.	332.	241. 2 378. 4 215. 2	39. 447	. 237. . 393. . 200.	357.	203. 289. 207.
• 1117: 5496, 1126: 8205, 1135: 142	17016. 2	5972. 29	880. 241	29. 1.717 66. 12355 20. 105	. 3696.	754.	
<b>1</b> 31.9: 66.	62. 159. 44. PULSE—P]] E	345. 64.	653. 9 50.	05. 1075 36. 54	. 845. . 50.	448. 54.	179.
PK IT ENE	KGY ARE	A BKG	ND FWH	M CHANNE	L LEFT PI	W CTS/S	EC ZERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 646. 6 1 657. 7 1 665.	27 4093 23 12543 92 739 10 59 28 430	1. 7 18. 10	87. 2.0 89. 1.9 17. 2.0 24. 2.4 08. 2.0	1 1118.8 9 1128.8 3 1206.1 5 1292.3 2 1314.7	7 1108 : 0 1108 : 0 1195 : 9 1286 : 5 1304 :	15 2.166E 34 6.822E 34 2.091F 21 1.232E 15 9.856E 21 7.180E 13 3.610E	01 0.5 02 0.3 01 1.4 -01 7.6

9111.9065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 02251

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9361.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 9JAN80 1259:58 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:**†**:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF L1FE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

# DUNKNOWN SAMPLE REPORT

665, 76

429.

875.

4.50 1331.70 1323 22 7.144E-01 10.9

• ELEMENT	PEAK FNERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
2-COPPER 2-ANTIMONY 2-ARSENIC	564. 2	1069. 1.1	L5038.	0. 6140		7. 1 0. 3 3. 2
1009: 231. 1018: 249. 1027: 243.	264.	233. 246. 320. 379. 214. 200.	400.	441	205. 212. 398. 334. 209. 204.	279.
• 111.7: 4918. 1126: 7500. 1135: 129.	15524. 24			11174. 3	742. 1083. 470. 650. 101. 103.	
<b> 1319:</b> 72.	142. 47.		857. 48.	907. i 39.	63. 67. 695. 379. 43. 40. N = 1 000	
PK IT ENER					FT PW CTS/	'SEC XERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 645. 6 1 657.	27 36778 23 115038 92 6902 99 503	3. 1332. 3. 1069. 2. 1316. 3. 579.	2. 61 2. 02 1. 97 2. 03 2. 29 2. 00	1022, 70 10: 1118, 87 11: 1128, 79 11: 1206, 12 11: 1292, 18 12: 1314, 64 13:	07 35 6.130 07 35 1.917 97 19 1.150 86 13 8.375	0E 01 0.5 'E 02 0.3 'E 01 1.4 'E-01 8.1

\*\*\*\*\*\*\*\* 10 ( 1980 12:16:42 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11008.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABIL

ACQUISITION DATE: 9JAN80 1310:32 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 628. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIBS.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

● ELEMENT	PEAK ENERGY	BKGI	ND	AREA	CONCE	√TR.	1 SIGMA ERROR	%EF	ROR
2-COPPER %-ANTIMONY %-ARSENIC	564. 2	1.5	30. 15	6393.	0. 71:	L2	0. 0021		8, 5 0, 3 3, 2
1009: 304. 1018: 317. 1027: 298.	336.	420.	467	506	4.99	aau	291. 419. 269.	740	
• 1117: 6594. 1126:10465. 1135: 193.	21559.	11976. 32461. 171.	37169.	30033.	15097.	4550.	1464. 981. 144.	267.	
<b>_</b> 1319: 107.	207.	425. 62.	768. 81.	1179. 52.	1236. 56.	989. 58.	551 74	1.99.	
PK IT ENER		REA I		FЫНМ			PW CTS/	SE.C	%ERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 646.	28 493 23 1563 89 88 13 6	893. 895.	1880. 1.530. 1600.	1. 99 1. 98	1022, 55 1118, 89 1128, 78 1206, 04 1292, 47	1107 1107 1198	17 2.067 32 8.225 32 2.607 16 1.482 13 1.047	E 01 E 02 E 01.	8.5 0.5 0.3 1.2 7.9
<b>6</b> 1 657.	26 48	377.	2569.	1. 96	1314. 70	1307	25 8. 129	F 00	2. 1.

9111.9065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0225K

TYPE OF SAMPLE: UNKNOWN

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 9JAM80 1321:14 \* FWHM(1332) 2.390PRESET TIME(LIVE): SEC \* SENSITIVITY: 600. 5.000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

:†:

DETECTOR: GFL1-8

DETECTOR: GFL1-8 \* LIBRARY:NUCL.L181
DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

# UNKNOWN SAMPLE REPORT

1.

1.

657, 28

665. 50

5492.

284.

1190.

708.

ELEMENT	···· ···· ··· ··· ··· ··· ··· ··· ···	PEAK ENERGY	BKG	ND	AREA	CONCE	47R.	1 SIGMA ERROR	ZEF	ROR
2-COPPER 2-ANTIMO 2-ARSEN:	JNY	511. 1 564. 2 657. 3	15	13. 16	1496. 3163. 5492.	0. 01. 1. 01: 0. 30:	50	0. 0011 0. 0030 0. 0087		6. 4 0. 3 2. 9
1009: 1018: 1027:	31.0. 286. 341.	284. 347. 307.	298. 427. 255.	314. 436. 258.	313. 479. 271.	316. 452.	294. 443. 259.	285. 394.	31 <i>6.</i> 381. 271.	lue, m <sup>e</sup>
1117: 6 1126:10 1135:		10829. 22046. 176.	1.2792. 34046. 195.	10509. 39037. 162.	5812. 31316. 143.		1174. 4874. 129.		4069. 286. 172.	
1301: 1310: 1319:	61. 112. 98. Pl	77. 226. 70. ULSE-PI	79. 441. 75. LE-UP C	76. 819. 77. ORRECTE	63.	1.368. 69.	64. 1091. 75.   110N =	574. 68.	85. 221. 63.	
PK IT	ENER	GY A	REA	BKGND	FMHM	CHAMMEL	LEFT F	W CTS/	SEC	ZERR
1 1 2 2 3 2 4 1 5 1	511. : 559. : 564. : 602. :	27 52 23 163 88 9	496. 902. 163. 224.	3822. 1895. 1513. 1895.	3. 67 2. 01 1. 98 2. 00	1022, 64 1118, 88 1128, 78 1206, 02	11.07 1107 1194	14 2 493 34 8 817 34 2 719 20 1 537	E 01 E 02 E 01	6. 4 Ø. 5 Ø. 2 1. 2
5 1	646. 1	84 	614.	1112.	2. 04	1292, 24	1285	16 1.023	E 00	8. 7

2.00

2.12

1314.74 1307

1331. 17 1327

17 9.153E 00

10 4.738E-01 14.5

1. 6

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0225L

TYPE OF SAMPLE: UNKNOWN

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 9JAN80 1331:57 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. 5. 000 SEC \* SENSITIVITY: ELAPSED REAL TIME: \* SHAPE PARAMETER : 15.0 % 749. SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

sk:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

KEY/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

## UNKNOWN SAMPLE REPORT

1

665. 28

1177.

7678.

• ELEMENT	PEAK ENERGY E	KGND	AREA	CONCE	4TR.	1 SlGMA ERROR	%EF	ROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	511. 0 3 564. 1 1 657. 1 1	.3302. 74	49966.	4. 664	41	NOT DE1 0. 0090 0. 0353		0, 2
1009: 1711. 1018: 1641. 1027: 1634.		:2. <b>1</b> 822.	1649.	1703.		1632.	1667. 1661. 1611.	
• 1117:37088. 1126:62908. 1135: 3186.	52182. 5572 116147. 16274 2953. 255	6. 170909.	128002.		20410.		27078. 3737. 2048.	
1310: 1043. 1319: 838.		i1. 4649. i2. 666.	6117. 653.	6042. 686.	4629. 684.	2592. 674.	802. 1.269. 730.	
PK IT ENER		BKGMD	FWHM		LEFT F		'SEC	ZERR
1 2 559. 2 2 564. 3 1 602. 4 1 645. 5 1 657.	11 749966. 78 43511. 98 2533.	14763. 13302. 19071. 8997. 11590.		11.18. 64 11.28. 55 12.05. 84 12.92. 16 13.14. 45	1107 1196 1287	37 4.020 37 1.250 19 7.253 12 4.223 17 4.158	)E 03 ?E 01 ?E 00	0.2 0.1 0.7 5.7 0.9

1.89

1330.74 1326

11 1.961E 00 10.9

\*\*\*\*\*\*\*\*\*\*\* 10 1980 12:20:13 PM \*\*\* \*\*\*\*\* 91119065 QY RF L EAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225M TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 11447.00 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 9JAN80 1344:40 \* FWHM(1332) 2.398 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 13. DETECTOR: GEL 1-8 \* LIBRARY: NUCL. L181 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGN	D	AREA	CONCE!	4TR.	1 SIGMA ERROR	%ERROR
X-HWIIMONY	511. 1 564. 2	1.79	5. 1.7	3047.	0. 761	L3	0. 0022	0.3
%-ARSENIC	657. 3	1.17	6.	5529.	0. 21.5	54	0. 0063	2. 9
1009: 31 1018: 38 1027: 35		433.	512.	564.	553.	511.		389.
	5. 11185. 2. 23544. 4. 203.		41216.	33200.	16995.	5210.		
1310: 13 1319: s	6. 95. 7. 248. 9. 85. PULSE-P1	462. 63.	840. 79.	1219. 81.	1427. 65.	1031. 62.	576. 67.	
PK IT EN	ERGY A	REA B	KGMD	FЫНМ	CHANNEL	LEFT F	PW CTS/	SEC XERR
2 2 55	4. 23 173	827. 047.	4658. 2083. 1795. 1794.	2. 59 2. 00 1. 98 1. 94	1022. 61 1118. 86 1128. 79 1143. 95	1.107 1107	15 2 321 37 8 971 37 2 884 12 1 912	F 01 0.4 E 02 0.2
	2. 89 9 6. 1.2	727. 618.	1793. 1328. 1176.	1. 98 2. 09 1. 99	1206. 05 1292. 44 1314. 69	1199 1286	15 1. 621 15 1. 029 16 9. 215	E 01. 1.2 E 00 9.3

665.34

342.

945.

2.11

1330.86 1326

12 5.695E-01 13.8

1.

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q225N

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 9414.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TAB1

:4:

ACQUISITION DATE: 9JAN80 1355:22 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 637. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

•	ELEMENT		PEAK ENERGY	BKG	ND	AREA	CONCE	NTR.	1 SIGMA ERROR	ZER	ROR
•			511. 3 564. 2 657. 3	51: 21 16	72. 20	1020. 1047. 6580.	0. 01 1. 07 0. 31	76	0. 0011 0. 0029 0. 0089		0. 5 0. 3 2. 9
•	1009: 1018: 1027:	359. 400. 378.	421. 41.7. 371.	362. 462. 331.	347. 500. 373.	366. 521. 326.	369. 546. 328.	389. 544. 351.	382. 486. 392.	371. 402. 361.	
•	1117: 1126:1 1135:		12961. 27525. 264.	15267. 4181.9. 226.	12489. 47605. 235.	6722. 38454. 236.	2646. 19730. 240.	1433. 5809. 242.	2006. 1206. 221.	5194. 408. 256.	
•	1301: 1310: 1319:	73. 142. 137. F	110. 255. 89. ULSE-PII	92. 552. 101. _E-UP C	105. 1.053. 92. ORRECTE	95. 1440. 65. D DATA.	109. 1608. 85. CORREC	97. 1237. 90. TION =	114. 723. 87. 1. 000	1.22. 263. 102.	
	PK IT	ENER	GY AI	REA	BKGND	FWHM	CHANNEL	I FFT F	ฟ การ/	verc	7EP6

	L. L.	7. 1	EMERLIT	HREH	BKLIND	нинм	CHANNEL LEFT	Р₩	CTS/SEC	XERR
			511. 25	1.020.	5163.	2. 62	1022.92 1016	14	1. 701F 00	10.4
_			559. 26	62805.	2611	2. 01	1118.86 11.08	32	1.047E 02	0.4
	3	2	564. 23	201.047.	2172.	2. 99	1128. 78 1108	32	3.351E 02	0.2
	4	1	602. 87	11499.	2784.	2. 02	1206.01 1194	24	1.917E 01	1. 1
_	5	1.	645. 95	709.	1302.	2. 05	1292.10 1286	12	1. 182E 00	8. 1
	6	1	657. 25	6580.	1662.	2. 04	1314.69 1305	19	1. 097E 01	1.5
	7	1.	665. 56	433.	1082.	2. 62	1331. 29 1324	13	7. 224E-01	11.8

\*\*\*\*\* 10 / 1 1980 12:22:36 PM \*\*\*\* **\_**\*\*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 02250

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9191,000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TAB1

\*

ACQUISITION DATE: 9JAN80 1406:13 \* FWHM(1332) 2.399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GEL1-8

\* LIBRARY: NUCL, L184 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

0.5003803 KEY/CHML: \* HALF LIFE RATIO:

8.99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

•	ELEMENT		PEAK ENERGY BK		BKGND AREA		CONCENTR.		1 SIGMA ERROR	%ERROR	
•	%-COPPE %-ANTII %-ARSEM	10144	511. Ø 564. 2 657. 3	100	3483. 1: 1066. 112! 851. 3:		0. 013 0. 618 0. 173	9	0. 0010 0. 0021 0. 0055	İ	5. 9 9. 3 3. 2
•	1009: 1018: 1027:	188. 273. 222.	234. 299. 226.	222. 309. 200.	215. 359. 1.66.	197. 354. 196.	215. 382. 177.	224. 367. 169.	209. 299. 169.	200. 269. 195.	
•	1117: 1126: 1135:	4607. 7223. 121.	7099. 15117. 100.	8470. 23506. 84.	7005. 26893. 102.	3830. 21847. 107.	1494. 11094. 96.	715. 3357. 94.	1056. 672. 125.	2758. 149. 92.	
•	1301: 1310: 1319:	59. 61. 58. P	37. 131. 43. ULSE-PII	56. 291. 47. _E-UP C	50. 549. 38. ORRECTEI	44. 810. 45. D DATA.	57. 903. 43. CORRECT	43. 673. 58. ION =	51. 370. 40. 1. 000	55. 163. 48.	

	m.V.	.1 1	ENERUT	HINE.H	BKUND	нынм	CHHMNEL LEFT	РΜ	CTS/SEC	ZERR
		1	511. 03	1327.	3483.		AN AN INC. AND		2. 212E 00	6. 9
•		2		34668.	1376.		1118.89 1109		5. 778E 01	<i>9.</i> 6
•	-	2		112515.	1966.	1. 97	1128.80 1109	31	1.875E 02	0. B
	4	1.	602. 92	6734.	1260.	2.02	1206. 11 1195	20	1. 122F 01	1.4
_	5	1.	646. 20	425.	743.	2. 1.6	1292.60 1284	15	7. 076E-01	10.3
•	6	1	657. 26	3549.	851.	1. 97	1314.70 1306	18	5. 915E 00	2. 0
	7	1.	665. 55	177.	512.	2. 01	1331.28 1326	11	2. 947E-01	19. 6

91119065 QY RF

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0225P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8375.000 UNITS: UG

LEAD

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

ACQUISITION DATE: 9JAN80 1416:47 \* FWHM(1332) 2.390
PRESET TIME(L1VF): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

\*

:†:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

● OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00% \*

• ELEMENT	PEAK ENERGY	RKGND	AREA	CONC	1 ENTR.	SIGMA ERROR	%ERROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>		11.00.	118568		L70	0. 0024	Ø. 3
1009: 243 1018: 236 1027: 222	256.	305.	344. 3	58. 358.	348.	207. 307. 200.	221. 264. 200.
• 1117: 4882 1126: 7787 1135: 107	. 16226. 2	24782. <u>2</u> 8	372. 228	20. 1524. 02. 11464. 13. 97.	3435.	642.	2883. 163. 121.
1301: 54 1310: 94 1319: 57	138.	313. 43.	575. 8 44.	09. 918. 44. 42.	733. 57.	417. 50.	164.
PK IT ENE	RGY ARE	EA BKG	ND FWH	M CHANNEI	LEFT PA	√ CTS/S	EC ZERR
1 1 511 2 2 559 3 2 564 4 1 602 5 1 645 6 1 657 7 1 665	.27 3645 .23 11856 .91 707 .92 48 .28 377	30. 33 50. 14 58. 11 73. 10 84. 10 75. 8	17. 2.0 00. 1.9 53. 2.0 08. 2.2 93. 2.0	2 1118.8 8 1128.7 0 1206.0 6 1292.0 5 1314.7	3 1108 3 3 1108 3 9 1197 1 4 1281 2 5 1304 1	L7 1.033E 32 6.075E 32 1.976E 18 1.179E 21 8.063E 19 6.292E 11 3.618E	01 0.5 02 0.3 01 1.4 -01 10.3

91119065 QY RF LFAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 02250

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 10157.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

9JAN80 1427:21 \* FWHM(1332) ACQUISITION DATE: 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 622. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

• ELEMENT	PEAK ENERGY	BKGND	) 	AREA	CONCE		1 SIGMA ERROR	%EK	ROR
%-ANTIMON	511. 2 7 564. 2 657. 3	1233	12	1420. 1614. 4070.		36 75 21	0. 0020		6. 5 0. 3 3. 1
1009: 2: 1018: 2: 1027: 2:	57. <i>2</i> 91.	235. 342. 222.	399.	231. 448. 21.7.	473.	219. 419. 207.	350.	240. 311. 186.	
<b>1126: 80</b>	57. 7867. 78. 16572. 50. 124.		7700. 9030. 103.	23303.	1.1871		720.	3052. 175. 120.	
1310: 1 1319:	54. 52. 31. 174. 57. 59. PULSE-P1	354. 47.	596. 56.	873. 53.	956. 46.	825. 57.	413. 44.		
		rea ek					1 000 W CTS/:	SE.C	ZERR
2 2 5 3 2 5 4 1 6 5 1 6	59. 27	287. 1 614. 1 082. 1 420.	166. 848.	2.81 2.02 1.98 1.99 1.96 2.08	1022, 73 1118, 88 1128, 78 1206, 05 1292, 34 1314, 75	1108 1108 1198 1286	16 2.3670 37 6.3810 37 2.0270 18 1.1800 15 6.9950 19 6.7830	E 01 E 02 E 01 E-01 1	6.5 0.5 0.3 1.4 1.0

91119065 QY RF

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0225k

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 9949.000 UNITS: UG

LEAD

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

:4:

\* LIBRARY: NUCL. LIB1

ACQUISITION DATE: 9JAW80 1437:56 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

DETECTOR: GEL.I-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

•	ELEMENT		PEAK ENERGY BKGND		AD	AREA	CONCENTR.		1 SIGMA ERROR	ZERROR	
•	%-COFPER %-ANTIMO %-ARSEN:	'r'MC	511. 1. 564. 2 657. 2	73: 32: 25:	18. 28	1785. 3208. 9365.	0. 017 1. 447 0. 429	2	0. 0013 0. 0035 0. 0118	Ø.	. 2
•	1009: 1018: 1027:	533. 563. 539.	578. 669. 496.	530. 638. 522.	576. 744. 516.	497. 782. 492.	552. 799. 502.	530. 718. 514.	540. 714. 503.	581. 579. 478.	
•	1117:12 1126:19 1135:		18505. 40116. 462.	21366. 60030. 455.	17265. 67035. 365.	9386. 52493. 393.	3655. 26474. 333.	2062. 8100. 391.	3027. 1783. 391.	7742. 600. 398.	
•	1301: 1310: 1319:	162. 264. 197. P	168. 433. 148. ULSEP11	175. 842. 156. E-UP CI	144. 1532. 156. DRRECTE	133. 2079. 158. ID DATA.	146. 2207. 155. CORRECT	161. 1819. 137. (LON =	175. 959. 156. 1. 000	205. 389. 144.	

PK.	11	ENERGY	AREA	EKGND	FWHM	CHANNEL LEFT	FΉ	CTS/SEC	XERR
1 2 3	2	511. 06 559. 24 564. 20	1785. 89070. 283208.	7350. 3765. 3218.	3. 21 2. 03 2. 00	1022.53 1015 1118.81 1108 1128.72 1108	33	2. 975E 00 1. 484E 02 4. 720E 02	7. 2. 0. 3 0. 2
- 4 5	1. 1. 1	602. 85 645. 88 657. 23 665. 66	16704. 1116. 9365. 501.	4265. 4265. 2282. 2520. 1658.	1. 98 2. 14 2. 09 2. 22	1205. 72 1100 1205. 98 1194 1291. 97 1286 1314. 64 1306 1331. 50 1326	29 14 1.7	2.784E 01 1.860E 00 1.561E 01 8.347E-01	1. 0 6. 8 1. 3

91119065 0Y RF LEAD

SAMPLF DATE: 8JAM80 1048:00 SAMPLF IDENTIFICATION: 0225S

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9766.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. THEAL

:+:

### ACQUISITION DATE: 9JAN80 1449:02 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:†:

\*

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

\*

:4:

• ELEMENT		PEAK NERGY	BKG	ND I	AREA	CONCE	ITR.	1. SIGMA ERROR	%EF	ROR
<pre>%-COPPER %-ANTIMO %-ARSENI</pre>	ihit	564. 2	12	86. 1.3	3816.	Ø. 697	79	0. 0009 0. 0022 0. 0063		9. 4 0. 3 3. 2
<b>_</b> 1018:	249.	286.	334	247. 378. 213.	429.	408.	409.	246. 326. 220.	294	
<b>1126:</b> 8	3918. 1	.8361.	27973.	31690.	25652.	1742. 13035. 125.	3893.	1304. 729. 120.	3269. 217. 118.	
1310: 1319:	104. 72.	170. 51.	370. 52.	682.	939. 50.	1090. 54.	845. 64.	61. 444. 78. 1. 000	1.66.	
● PK IT	ENERGY	' AR	EA	BKGND	FЫНМ	CHANNEL	LEFT F	PW CTSZ	SE.C	ZERR
<ul> <li>2 2</li> <li>4 1</li> <li>5 1</li> <li>6 1</li> </ul>	511. 16 559. 27 564. 23 602. 91 645. 97 657. 26 665. 46	3 1338 L 76 7 5 3 42	192. 116. 100. 129. 167.	1286. 1250. 964.	2. 49 2. 01 1. 99 2. 00 2. 12 1. 99 2. 03	1022, 72 1118, 88 1128, 78 1206, 09 1292, 13 1314, 70 1330, 98	1109 1109 1197 1286 1303	15 1.627 31 6.982 31 2.230 17 1.300 16 8.818 24 7.111 10 3.283	E 01 E 02 E 01 E-01 E 00	9.35 0.33 1.9.4 19.8 19.8

\*\*\*\*\*\*\*\*\* 19 1980 12:28:24 PM \*\*\*\* \*\*\*\*\* 

91119065 QY RF LEHD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 02525T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12870.00 UNITS: UG

SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 1459:40 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 630. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 009KV

0.5003803 KEY/CHNL: \* HALF LIFF RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGW	<u>D</u>	AREA	CONCE	VTE.	1 SIGMA ERROR	%ER	ROR
<ul><li>%-COPPER</li><li>%-ANTIMON</li><li>%-ARSENIC</li></ul>	' 564. 2	164	8. 16	3050.	Ø. 646	55	0. 001,9		6. 6 0. 3 2. 9
<b>1018:</b> 30	95. 317. 98. 348. 91. 304.	448.	535.	600.	528.	541	322. 466. 328.	354	
<b>1126:109</b>	92. 10888. 54. 22509. 91. 196.	33988.	38789.	30899.	15785.	4738.	925.	304.	
1310: 1: 1319: 1:	33. 75. 40. 219. L1. 76. PULSE-P1	460. 76.	826. 65.	1134. 63.	1314. 67.	1070. 80.	538. 69.	230.	
	NERGY A							SEC:	XERR
2 2 5 3 2 5 4 1 6 5 1 6 6 1 6	54. 22     163 32. 89         9 45. 91.	535. 050. 559. 522. 340.	2042. 1648.	2. 04	1022.53 1118.85 1128.77 1206.05 1292.02 1314.73	1107 1107 1198 1286 1307	13 2.502 34 8.756 34 2.717 16 1.593 12 8.701 16 8.900 14 6.709	E 01 E 02 E 01 E-01 E 00	6.5 0.5 0.3 1.2 9.7 1.6 2.3

\*\*\*\*\*\* 10 . 1980 12:29:34 PM \*\*\*\* 

91119065 QY RF

L.EAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11193.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 1510:23 \* FWHM(1332) 2.390PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* MBR ITERATIONS: 10.

DETECTOR: GFL 1-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV

KEY/CHML: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

• ELEMENT	·	PEAK ENERGY	BKG	ND 	AREA	CONCE	NTR.	1 SIGMA ERROR	ZER	ROR
%-coppe %-antim %-arsen	lON'Y	511. 0 564. 2 657. 3	10	82. 12	4815.	0. 570	23 31 51			Ø. 3
_	201. 198. 198.		227.	204. 248. 172.	264.	263.	269.	234.	207.	
<b>1126</b> :	8201.		6884. 25598. 106.	29816.	3199. 24071. 104.	12252.	3809.		171.	
1301: 1310: 1319:	62. 51.	122. 51.	261. 38.	595. 46.	656. 49.	740. 42.	599. 47.			
PK IT	ENER					CORRECT		1.000 W CTS/	'SEC	ZERR
3 1. 4 1	559. ; 564. ; 692. ; 646. ; 657. ;	24 124 90 7 16 ! 25 3	520. 947.	1082. 1544. 522.	2. 03 1. 99 2. 03 2. 07 2. 05 2. 21	1118.89 1128.80 1206.06 1292.53 1314.69 1330.92	1108 1194 1287 1306	29 4.817 29 2.080 25 1.240 12 8.666 17 5.079 12 3.448	05 02 05 01 35-01 05 00	0.6 0.3 1.4 7.6 2.2 17.3

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 03028

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10197.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DA1E: 9JAN80 1520:57 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.000KY

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

• ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
• %-copper %-antimony			0. < 150499			ECTABLE Ø. 3
2-ARSENIC	657. 3	972.		0. 1723		
1009: 239. 1018: 277. 1027: 252.	284.	280. 2 269. 2 252. 2		336. <i>2</i>	48. 256. 86. 242. 19. 229.	271. 253. 249.
• 1117: 4932. 1126:10039. 1135: 166.	20553. 3	1341. 358	:87. 4190. :33. 28516. :12. 123.	14824. 43		3849. 224. 149.
1310: 99. 1319: 82.	159. 54.	323. 6 51.	103. 876. 61. 60.	70. 901. 7 48. CORRECTION	54. 407. 57. 63.	
PK IT ENER	GY ARE	A BKGM	ID FWHM	CHANNEL LEF	T PW CTS/9	SEC ZERR
1 2 559. 2 2 564. 3 1 602. 4 1 645. 5 1 657. 6 1 665.	23 15049 90 885 95 66 25 377	9. 135 8. 179 4. 78 7. 97	55. 1.99 6. 1.98 3. 2.30 2. 2.03	1118.89 110 1128.78 110 1206.06 119 1292.10 128 1314.69 130 1331.08 132	8 33 2.508 4 21 1.476 6 13 1.107 7 16 6.294	E 02 0.3 E 01 1.3 E 00 7.1 E 00 2.0

91119065 QY KF

telmos aosama ma

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302C

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 6789.000 UNITS: UG

LEAD

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABI

+:

ACQUISITION DATE: 9JAN80 1531:35 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2.000KY

KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCF LIMIT: 85.00%

\*

• ELEMENT	PEAK ENERGY E	KGMD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
2-COPPER 2-ANTIMONY 2-ARSENIC		522. 7	71989.	0.5442	0. 0022	0.4
		:9. 104. :2. 122. .6. 113.	132.	129. :	117. 123. 147. 129. 107. 1.08.	
• 1117: 2280. 1126: 4710. 1135: 62.	9750. 1515		13789.	748 7094. 2: 39.	417. 617. 113. 394. 50. 51.	82.
1310: 35. 1319: 33.	25. 1 64. 15 <i>2</i> 4. 2 ULSE-PILE-UR	i3. 271. :7. 18.	346. 20.	399. : 27.	339. 195. 21. 18.	22. 78. 30.
PK IT ENER		BKGMD			FT PW CTS/	'SEC XERR
1 2 559. 2 2 564. 3 1 602. 4 1 646. 5 1 657.	23 71989. 91 4323. 27 288.	71.7. 522. 780. 476. 390.	2. 05 1. 98 1. 98 2. 23 2. 17	1118.89 11: 1128.79 11: 1206.09 11: 1292.75 12: 1314.74 13:	07 33 1.200 94 26 7.205 83 17 4.796	0E 02 0.4 5E 00 1.8 5E-01 12.2

\*\*\*\*\*\* 1.0 3 1980 12:33:04 PM \*\*\*\* \$1404040404040404040 91119065 QY RF L.EAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q302D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8867.000

UNITS: LIG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE WAME: EFF. TABL

ACQUISITION DATE: 9JAN80 1542:02 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 623. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	564. 2	1225. 1	.40370.	0. 0032 0. 8140 0. 1886	0.0025	0.3
	257.	277. 286	6. 302.	234. 2 277. 2 219. 2		293.
• 1117: 4781. 1126: 9444. 1135: 141.	19044. 29	9432. 33532	. 26581.	1488. 9 13668. 46 128. 1	189. 787.	
1310: 81. 1319: 60.	152. 58.	339. 509 54. 41	9. 847. 52.	77. 857. 7 44. CORRECTION	'05. 370. 50. 57.	66. 165. 49.
PK IT ENER	GY AREA	A BKGND	FWHM	CHRINNEL LEF	T PW CTS,	'SEC ZERR
1 2 559. 2 2 564. 3 1 602. 4 1 646. 5 1 657. 6 1 665.	22 140370 89 8309 14 433 25 3563	5. 1526. 3. 1225. 9. 1179. 3. 1373. 2. 908. 7. 638.	1. 98 2. 03 1. 92 2. 02	1118, 87, 116 1128, 77, 116 1206, 06, 113 1292, 49, 128 1314, 69, 136 1331, 11, 133	97 35 2.339 97 18 1.385 97 19 7.214 97 16 5.933	9E 02 0.3 5E 01 1.2 4E-01 13.0

\*\*\*\*\*\* 10 . 1980 12:34:17 PM \*\*\*\*\* 

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q302E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9487.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 9JAN80 1552:36 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

DETECTOR: GELI-8

\* LIBRARY: NUCL. L181 DATE CALIBRATED: 2. 000KV

0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIN: 85. 99%

\*

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCE.		L SIGMA ERROR	%ERROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>	511. 0 564. 2 657. 3	3387. 1252. 440.	0. 143787. 3634.	Ø. 78	07	NOT DETE 0.0024 0.0055	CTABLE 0. 3 3. 0
1009: 254 1018: 259 1027: 251	. 250.	268. 288. 215.	255. 29	32. 266. 97. 299. 36. 193.	249. 251. 224.	220. 295. 215.	251. 246. 227.
• 1117: 4658 1126: 9636 1135: 148	. 19663. :		3957. 389 3865. 275: 125. 12		953. 4157. 120.	1371. 832. 132.	3560. 212. 110.
1301: 46 1310: 91 1319: 73	. 153.	59. 319. 39. 5-UP CARE	579. 78 30. 5	54. 41. 37. 848. 54. 49.	51. 736. 59. TION =	65. 385. 57. 1 000	61. 168. 61.
PK IT ENE	RGY ARI				LEFT PI		EC XERR
2 2 564 3 1 603 4 1 646 5 3 657	". 27	87. 13 30. 15 54. 6 34. 4	527. 2.0 252. 2.00 355. 1.9 351. 1.9 440. 2.0 130. 2.3	3 1128.78 7 1206.02 5 1292.36 9 1314.72	1107 1194 1286 1303	33 5.8556 33 2.3966 20 1.4056 12 9.2286 41 6.0566 41 4.5946	: 02

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302F

TYPE OF SAMPLE: UNKNOWN

'SAMPLE QUANTITY: 9103.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:1:

ACQUISITION DATE: 9JAN80 1603:14 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

**:**†:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

\* MEUNDHNUE LINII: 85.88%

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTI	1 9 R. EF	GIGMA ROR %	ERROR
%-copper %-ANTIMONY %-ARSENIC	564. 2	847.	95581.	0.5419	9.	0020	0.4
1009: 158 1018: 152 1027: 151	. 158.	187. 1	L70. 183.	201.	183.	154. 14 187. 16 148. 16	9.
• 1117: 2795 1126: 6350 1135: 73	. 12977. 1	L9650. 229	921. 1.8368.	9361. :	2727.	533. 12	7.
1301: 37 1310: 66 1319: 28	. 100. . 34.	161. 3 36.	342. 506. 27. 33.	526.	413. 39.	228. 8 27. 3	3.
PK IT ENE	RGY ARE	EH BKGM	WD FWHM	CHANNEL. LI	EFT PW	CTS/SEC	%ERR
1 2 559 2 2 564 3 1 602 4 1 646 5 1 657 6 1 665	. 23       9556 . 86       58: . 22       4: '. 24       21:	25. 110 31. 84 19. 81 16. 44 40. 53	17. 1.98 L2. 2.01 19. 1.98 90. 1.99	1118, 88 1: 1128, 80 1: 1206, 00 1: 1292, 65 1: 1314, 67 1: 1330, 79 1	109 34 197 17 287 13 305 18	3.521E 01 1.593E 02 9.698E 00 6.927E-01 3.567E 00 3.148E-01	0.3 1.5 8.7 2.7

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 03020

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUNNTITY: 8228.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**†**:

ACQUISITION DATE: 9JAN80 1613:45 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 613. SFC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

-,-

:†:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KY

FFSET: -0.5932283 KEV \* ABUNDANCE L1MIT: 85,00% \*

• ELEMENT	PEAK ENERGY	BKGMD	 	:EA	CONCEN		1 SIGMA ERROR	ZER	ROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>		806.	876	i96.	0. 551	.1	MOT DETI 0.0021 0.0043		Ø. 4
1009: 148. 1018: 139. 1027: 132.	122.		166.	147.	181.	1.61.	180.	158.	
<ul> <li>1117: 2553.</li> <li>1126: 5697.</li> <li>1135: 73.</li> </ul>	11980. 1	8178. 21	137. 1	.6796.	8599.	2466.			
1310: 37. 1319: 40.	30. 97. 31. ULSE-PILE	172. 33.	320. 28.	441. 20.	476. 26.	387. 32.	199. 36.	33. 90. 24.	
PK IT ENER		A BKG					W CTSZ	SEC	ZERR
1 2 559. 2 2 564. 3 1 602. 4 1 646. 5 1 657.	23 8769 88 558 03 40	6. 8 4. 6 3. 5	06. 1 08. 1 75. 2	97 1 97 1 2.16 1	L118. 90 L128. 79 L206. 03 L292. 26 L314. 66	1107 1198 1284	44 3. 230 44 1. 462 17 9. 306 20 6. 717 19 3. 288	E 02 E 00 E-01	0.8 0.3 1.5 9.8 2.8

\*\*\*\*\* 10 4 1980 12:37:46 PM \*\*\*\* \*\*\*\*\*\* \* 91119065 QY RF LEAD SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q302H UNKNOWN TYPE OF SAMPLE: SAMPLE QUANTITY: 7845.000 UNITS: UG SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 1624:11 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): \* SENSITIVITY: 699. SEC 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GEL1-8 \* L1BRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 -0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGW	D 1	REA	CONCE		1 SIGMA ERROR	%ERROR
• %-copper %-antimony	511.0 564.0			0. ( 5740			NOT DET	ECTABLE 0. 3
2-ARSENIC							0. 0055	
		205. 210. 166.	229.		227.	263.	227. 219. 173.	
• 1117: 379 1126: 778 1135: 12	2. 16012.			22514.	1269. 11268. 84.	3316.		175.
1310: 6 _ 1319: 5	7. 46. 3. 122. 5. 42. PULSE-P]I	237. 39.	435. 46.	622. 34.	664. 39.	554. 38.	327. 43.	38. <b>121.</b> 33.
PK IT EN	ERGY AF	REA B	KGND	FWHM	CHANNEL	LEFT F	°W CTS/	SEC ZERR
1 2 55 2 2 56 3 1 60 4 1 64 5 4 65 6 4 66	2.88 69 6.01 5 7.28 21	71.2. 924. 504. 772.	680.	2. 03 2. 00 1. 99 2. 30 2. 07 1. 84	1118, 88 1128, 78 1206, 03 1292, 22 1314, 74 1330, 95	1109 1197 1284 1308	32 4.780 32 1.945 20 1.154 16 8.396 30 4.619 30 2.403	E 02 0.3 E 01 1.4 E-01 8.6 E 00 2.1

91119065 QY RF LEAD

SAMPLE DATF: 8JAN80 1048:00 SAMPLE IDFNTIFICATION: 03021

TYPE OF SAMPLE: UMKNOWN

SAMPLE QUANTITY: 12103.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:†:

:4:

\*

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00% \*

ELEMENT		PEAK NERGY	BKGN	1D (	AREA	CONCE		1 SIGMA ERROR	ZER	ROR
X-COPPER		511. 0		52.	Ø. <		24	NOT DET	ECTABL	.E
Z-ANTIMO Z-ARSENI		564. 2 657. 3			5838. 2817.		58 (8	0. 0018 0. 0042		0. 3 3. 8
		210.	237.		237.		207.			
			283. 204.	279. 204.	247. 223.		240. 232.		239. 193.	
1117: 3				5754.					3371.	
	173. 1 129.	8629. 2 117.	:8395. 109.	32725. 105.	26208. 101.		4029. 97.	790. 108.	220. 110.	
1301:	52.		48.	58.	57.	51	43.	44.	63.	
	77. 54.			459. 38.			548. 40.	330. 34.	135. 50.	
<b>7</b>	PUL	SE-PILE	-UP CO	ORRECTE	D DATA.	CORRECT	T10N =			
PK IT	ENERGY	ARE	:A E	BKGND	FWHM	CHFINNEL	LEFT F	PW CTS/	SEC	ZERR
	559. 27			1828.	2. 97	1118.88		44 4.842		0.6
	564. 23 602. 91			1324.	1. 98	1128.79		44 2. 281		0. I
	602. 31 646. 07	789 51		1.325. 767.	2. 01. 1. 92	1206.08 1292.34		20 1.315 13 8.564		1.3
	070. 81 657. 26			1940.	1. <i>9</i> 2 2. 03	1314. 71		40 4.695		8. 8 2. 9

\*\*\*\*\*\*\* 10 N 1980 12:40:06 PM \*\*\*\* \*\*\*\*\* 

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: QZ02J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9028, 000 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 9JAN80 1645:20 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 61.6. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SFC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGW	D F	9REA	CONCE		1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC		84	6. 98	8508.	0. 567	73		ECTABLE Ø. 4 3. 6
1018: 17		188.	199.	199.	1.53. 196. 130.		184.	178.
1117: 291 1126: 622 1135: 18		5347. 20450. 74.	23649.	19352.	9952.			
1310: 4	4. 33. 9. 89. 4. 27. PULSE-PIL	187. 34.	334. 32.	486. 49.	602. 37.	451. 19.	258. 27.	36. 104. 34.
PK IT EN		:EA B					т. 900 W СТS/	SEC %ERR
1 2 55 2 2 56 3 1 60 4 1 64	4. 25 985 2. 93 61	708. L37.	1035. 846. 990. 637.	2. 04	1118, 94 1128, 84 1206, 13 1292, 39	1107 1195	37 3.704 37 1.642 24 1.023 14 5.933	E 02 0.3 E 01 1.5
5 1 65			714.	1. 97	1314. 81		21 3.780	

\*\*\*\*\*\* 1.0 N 1980 12:41:17 PM \*\*\*\*\*\*\*\* \*\*\*\* 91119065 QY RF L EAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7873.000 UNITS: UG

.25 IN SAMPLE GEOMETRY:

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 1655:53 \* FWHM(1332) 2, 399 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00% :4:

• ELEMENT	P EN	EAK ERGY (	BKGMD	HREA	CONCE	NTR.	1. SIGMA ERROR	%ERROR	
• %-COPPER %-ANTIMON %-ARSENIC	¥'t' 5	·64. 3	934. 1.	08345.	Ø. 71(	59	0. 0025	Ø. R	•
<b>_ 10</b> 18: 3	200.	189. 1	77. 174 57. 202 57. 178	. 215.	212.	215.	180. 188. 157.	190.	
<b>1126: 67</b>	743. 14	207. 222	60. 5101 30. 26232 88. 85	. 21347.	10911.	3412.	633.	132.	
1310: _ 1319:	44. 60.	93. 1 41.	43. 40 99. 389 40. 34 P CORRECT	. 563. . 40.	658. 37.	517. 37.	264. 42.		
			BKGMD					SEC ZER	:R
2 2 5 3 1 6 4 1 6 5 1 6	564. 26 502. 94 545. 92 557. 29	1.08345. 6638. 468. 2540.	1130. 934. 1336. 570. 574. 540.	1. 97 2. 01 2. 32 1. 96	1118. 94 1128. 84 1206. 16 1292. 04 1314. 77 1331. 65	1107 1198 1283 1308	36 4.150 36 1.806 22 1.106 17 7.795 15 4.233 12 1.643	E 02 0.3 E 01 1.5 E-01 8.6	: :

\*\*\*\*\*\*\*\* 10 N 1980 12:44:49 PM \*\*\*\* \*\*\*\*\*\* 

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q302N

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12074.00 UNITS: ШĞ

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 9JAN80 1727:27 \* FWHM(1332) 2, 399 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCEN		1 SIGMA ERROR	ZERI	ROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>	564. 3	1376.	0. < 151193. 3163.	0. 656(	<b>a</b>		1	0. 3
1009: 263. 1018: 249. 1027: 260.		283. 25	59. 308.	270.	296.	273.	246.	
• 1117: 4181. 1126: 9523. 1135: 149.	<b>20156</b> . 31	L076. 3607		15283.	4673.	948.	211.	
<b>1319:</b> 75.	46. 143. 50. 'ULSE-PILE-	259. 47 57. 4	77. 716. 41. 63.	793. 45.	618. 54.	364. 37.	67. 127. 48.	
PK IT ENER		H BKGNI		CHANNEL I			SEC :	ZERR
1 2 559. 2 2 564. 3 1 602. 4 1 646. 5 1 657.	25 15119 92 9069 01 57	3. 1376 9. 154 3. 86:	5. 1.98 7. 1.97 1. 1.98	1118, 93 : 1128, 83 : 1206, 11 : 1292, 22 : 1314, 74 :	11.10 1194 1.285	32 5, 234 32 2, 520 23 1, 512 14 9, 545 22 5, 272	E 02 E 01 E-01	0. 6 0. 3 1. 2 8. 4 2. 3

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 03020

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10306.00 UNITS: UG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. TAB1

:†:

ACQUISITION DATE: 9JAN80 1738:05 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:+:

\*

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

• ELEMENT	PEAK ENERGY	BKGN	ID f	REA	CONCE	ΛTR.	1 SIGMA FRROR	XER	ROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	564. 3	1.17	'4. 11 <sub>°</sub>	4581.	0. 583	<b>:</b> 5	0. 0020		Ø. 3
<b>1018: 18</b>	18. 204. 13. 183. 11. 163.	213.	261.	209.	232.	242.	200. 198. 195.	1.99.	
<b>1</b> 126: 723	.0. 51,56. :4. 15190. :8. 91.		27721.	22447.	11731.	3607.	1041. 664. 67.	157.	
<b>1</b> 319: 5	'0. 92.	208. 43.	385. 43.	623. 28.	674. 38.	505. 41.	42.	56. 123. 53.	
	IERGY A						'W С152	SEC	ZERR
1 2 55 2 2 56 3 1 68 4 1 64	54. 26     114 02. 93         6	248. 581. 672. 449.	1174. 1860.	2. 02 1. 98 1. 99 2. 47	1118. 93 1128. 84 1206. 13 1292. 36	1109 1198	51 4.208 51 1.910 30 1.112 13 7.485	F 02 E 01	0.7 0.3 1.5
5 1 65			57.5. 620.	2. 47 1. 91	1314. 73		16 4.328		8. 9 2. 4

9111.9065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11616.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: LFF. TABLE

+:

ACQUISITION DATE: 9JAN80 1748:36 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 17ERA71ONS: 10.

:4:

DETECTOR: GEL1-8 \* L1BRARY: MUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KV

:4:

• ELEMENT	PEAK ENERGY	BKGN	ID	AREA	CONCEN		1 SIGMA ERROR	ZER	ROR
Z-AMTIMONY		116	11. 12	4942.	Ø. 565	'5 )6	0. 0018		Ø. 3
• %-ARSFNIC	657. 3	St	، کد	2489.	Ø. 1Ø6	5 <u>3</u>	0.0038		3. 6
1009: 186. 1018: 232. 1027: 210.		225. 210. 160.	237.	241.	212.	238.	199.	210. 211. 150.	
• 1117: 3282. 1126: 7913. 1135: 99.	16457.	5950. 25465. 108.	5096. 30001. 102.		12717.	3815.		2977. 195. 102.	
1310: 65. 1319: 49.	43. 96. 48. ULSE-P11	225. 50.	388. 47.	549. 40.	658. 48.	477. 39.	311. 40.	50. 139. 41.	
PK IT ENER	:GY AF	EA E	3KGMD	F ЫНМ	CHANNEL.	LEFT P	W CIS/	SEC	ZERR
1 2 559. 2 2 564. 3 1 602. 4 1 646. 5 1 657.	26 1249 91 76 06 5 29 24	142. 148. 157. 189.	1101. 1150. 1003. 863.	2. 05 1. 98 2. 02 2. 01 2. 02	1118.94 1128.84 1206.08 1292.33 1314.77	1110 1194 1284 1305	28 4.152 28 2.082 20 1.275 21 9.280 17 4.148	E 02 E 01 E-01 E 00	0. 7 0. 3 1. 3 9. 1 2. 6
<b>9</b> 6 1 665.	61 2	?23.	770.	2. 92	1331. 40	1324	19 3.715	E-01 1	.8.8

\*\*\*\*\* 1.0 4 1980 12:48:16 PM \*\*\*\*\*\*\*\*\* \*\*\*\* 91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 03020

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 15686.00 UNITS: ЦG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 9JAN80 1759:10 \* FWHM(1332) PRESET TIME(LIVE):

2.390 600. \* SENSITIVITY: SEC 5.000 633. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED REAL TIME: ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FMERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: **95. 00%** 

## UNKNOWN SAMPLE REPORT

• ELEMENT	PEAK ENERGY	BKGM	D 6	HREA	CONCE	17 R.	1 SIGMA ERROR	%ERROR
*-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 2 657. 3	476 193 124	2. 9. 20( 8. :	0. < 2989. 4515.	. 0. 00: 0. 67: 0. 14:	?4 59 \$5	NOT DETI 0.0018 0.0044	ECTABLE 0.3 3.0
1009: 345. 1018: 354. 1027: 339.	392.	363.	391.	441.	418.	380.	348.	346.
• 1117: 6017. 1126:13020. 1135: 271.	27323. 4	41495.	48169.	38590.	20170.	6171.	<i>1.</i> 295.	362.
1301: 93. 1310: 123. 1319: 108.	201.	379. 81.	697. 76.	1069. 75.	1129. 100.	875. 85.	518. 79.	202.
							PW CTS/:	SEC ZERR
2 2 564. 3 1 602. 4 1 646.	90 126 06 7 26 45	89. 73. 36. 15.	1939. 2290. 1433.	1. 98 2. 01 2. 12 1. 99	1118.91 1128.80 1206.06 1292.33 1314.70 1331.25	1108 1196 1284 1306	32 7.477 32 3.350 20 2.112 15 1.226 16 7.526	F 02 0.2 E 01 1.0 E 00 8.2

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11796.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABA

**+**:

ACQUISITION DATE: 9JAN80 1706:23 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

:<del>|</del>:

● ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	511. 1. 564. 3 657. 3	951. 12	234. 29265. 2940.	0. 5719	9. 0018	30. 4 0. 3 3. 3
1009: 227 1018: 179 1027: 225	. 205.	220. 229. 213. 268. 202. 202.	272.	256. 237	". 221.	235. 244. 182.
<ul> <li>1117: 3561</li> <li>1126: 8328</li> <li>1135: 148</li> </ul>	. 16996. 26	772. 5874. 500. 30798. 97. 92.	25038.	1317. 770 13279. 4029 122. 98	. 682.	3011. 182. 112.
• 1301: 57 1310: 64 1319: 78	. 127. . 45.	38. 45.	662. 41.	727. 586 44. 50	d. 45.	55. 146. 61.
PK IT ENE	PULSE-P1LE- RGY AREA		ED DATA. FWHM	CORRECTION =	2000 0 100-1000-100-	SEC XERR
1 1. 511 2 2 559 3 2 564 4 1 602 5 1 646 6 1. 657	.32 28228 .25 129265 .93 7735 .01. 462	. 1256. . 951. . 1700. . 860.	2. 19 2. 03 1. 99 1. 98 1. 76 2. 03	1022.65 1017 1118.97 1107 1128.83 1107 1206.12 1196 1292.22 1282 1314.76 1305	11 3.895 31 4.705 31 2.154 25 1.283 16 7.702 18 4.899	E 01 0.6 E 02 0.3 E 01 1.4 E-01 10.1

\*\*\*\*\*\* 10 N 1980 12:43:38 PM \*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q302M

TYPE OF SAMPLE: UNKMOWN

SAMPLE QUANTITY: 10897, 00 UNITS: ЦG

.25 IN SAMPLE GEOMETRY:

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAM80 1716:57 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT		PEAK ENERGY	BKG!	ND I	AREA	COMCE	17E.	1 SIGMA ERROR	XERROR
• %-coppe %-antim %-arsen	ONY	511. 0 564. 3 657. 3	10	08. <b>1</b> 1:	0. < 5053. 2374.	0. 553		NOT DET 0.0018 0.0042	Ø. 3
			191. 224. 173.	207.	190. 246. 183.		223.	201.	209.
• 1117: 1126: 1135:	3138. 7252. 107.		23870.	4939. 27644. 85.		11597.	3457.	702.	2561. 157. 88.
1301: 1310: 1319:	68. 62.	106. 46.	205. 33.	361. 39.	588. 40.	637.	518. 32.	52. 277. 42. 1. 000	
PK IT	ENER			OKKE.C.TE BKGND	г сптп. Бинм			1.000 W CTS/	SEC ZERR
4 1.	559. 564. 602. 646. 657. 665.	25 115 92 7 02 : 29 2:	140. 374. 374.	1.008. 923. 931.	2. 04 1. 96 1. 95 1. 64 1. 90 0. 61	1118.94 1128.84 1206.12 1292.24 1314.77 1332.00	1108 1197 1281 1307	35 4.090 35 1.918 18 1.190 17 6.227 25 3.957 9 3.792	E 02 0.3 E 01 1.3 E-01 12.7

91119065 OY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302R

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 13426.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

### ACQUISITION DATE: 9JAN80 1809:56 \* FWHM(1332) 2.390
| PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
| ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
| ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

🕨 UNKNOWN SAMPLE REPORT

665, 53

264.

573.

ELEMENT	PERK ENERGY	BKGND	AREA	CONCENT F		SIGMA RROR 	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	511. 1. 564. 2 657. 2	1226. 14		0. 0032 0. 5570 0. 1157	Q1.	0007 0017 0039	Ø. 3
<b>1</b> 009: 250.	273. 237.	238. 236. 225. 270. 199. 197.	227. 289. 215.	232. 322.	218. 257. 233.	242.	3. 4 225. 219. 206.
1117: 4134. 1126: 9261. 1135: 164.	19220. 29	431. 6266. 754. 33865. 131. 114.	3603. 27133. 138.	13858.	919. : 1016. 1.1.5.		3444. 203. 97.
1310: 78. 1319: 77.	116. 56.	58. 66. 272. 503. 49. 57. UP CORRECTE	723. 37.	799. 47.	608. 45.	310.	55. 128. 45.
PK IT ENEF			FWHM	CHANNEL LE	,		SEC ZERR
1 1 511. 2 2 559. 3 2 564. 4 1 602. 5 1 645. 6 1 657.	28 31526 23 141683 91 8984 94 614	. 1494. . 1226. . 1615. . 741.	1.81 2.06 1.97 2.03 2.18 1.94	1022.60 10 1118.90 11 1128.79 11 1206.09 11 1292.09 11 1314.67 11	L07 33 L07 33 L96 20 286 13	6. 0295 5. 2546 2. 3616 1. 4976 1. 0236 5. 1696	02 0.3 01 1.2 00 7.5

2, 46

1331. 24 1325

12 4.398E-01 14.2

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 03025

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9244.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFF1CIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 9JAN80 1820:34 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 17ERATIONS: 10.

•1

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

• E	ELEM	EMT	·	Eh	ERK ERGY	BKG	MD	AREA	CONCE	NTR.	1 SIGMA ERROR	ZER	ROR
	i-AM	TIF	10NY		564. 2	10	173. 1	22459.	0. 70	<b>9</b> 5	NOT DET 0.0023 0.0051		0. B
•	101	8:	214.		213.	203.	214			233.	206. 21.9. 206.	191.	
•	1112	÷:	7923.	16	5574.	25665.	29488	. 23504.		3511.	1.081. 658. 112.	181.	
•	131	(i) :	82. 62.		1.20. 37.	255. 35.	439 38	. 630. . 49.	647. 47.	522. 39.	43. 303. 46.	133.	
•	PK	ΣT				.c−or c XEA			CORREC CHANNEL		i.000 PW CTS/	SEC	%ERR
•	1 2 3 4 5 6	1 1	602. 646.	23 90 10 24	122 7	472. 459. 797. 462. 768. 151.	1073. 1296. 960.	2. 04 1. 97 2. 00 1. 92 2. 09 2. 05	1118.87 1128.79 1206.06 1292.40 1314.66 1331.48	1108 1196 1284 1306	34 4.579 34 2.041 24 1.299 19 7.696 16 4.614 12 2.514	E 02 E 01 E-01 1 E 00	0. 6 0. 3 1. 3 0. 6 2. 3 4. 0

91119065 QY KF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0302T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11534.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:**†**:

ACQUISITION DATE: 9JAN80 1831:09 \* FWHM(1332) 2 390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

.,.

DETECTOR: GEL1-8

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

<sub></sub>

• ELEMENT	PEAK ENERGY	BKGN	ID	AREA	CONCE		1 SIGMA ERROR	%EF	ROR
<ul><li>%-COPPER:</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>		151	6. 15	0. < 5894. 3894.	0. 716	30 51 38		ECTABL	.E 0. 3 3. 1
1009: 25 1018: 25 1027: 26	2. 315.	276. 278. 263.	34.5.	270. 323. 228.	363.	292.	276. 262. 258.	262. 275. 221.	
<ul><li>1117: 523</li><li>1126:1041</li><li>1135: 17</li></ul>		9356. 32544. <b>1</b> 51.	7649. 37580. 154.	4274. 29862. 129.	15059.	1003. 4606. 111.	1490. 906. 167.		
1310: 8	6. 165.	306. 69.	589. 53.	886. 57.		771. 58.	433. 49.	72. 169. 69.	
PK IT EN			KGND				w cas/	SEC	ZERR
<ul> <li>2 2 56</li> <li>3 1 66</li> <li>4 1 64</li> </ul>	4.23 155 2.89 9	491. 644.	1830. 1516. 1895. 861. 988.	2. 03 1. 97 2. 02 2. 19 1. 95	1118, 87 1128, 78 1206, 04 1292, 19 1314, 76	1107 1196 1286	36 6.435 36 2.598 21 1.582 13 1.074 16 6.491	E 02 E 01 E 00	0.5 0.3 1.2 7.6 2.0

\*\*\*\*\*\* 10 N 1980 12:52:56 PM \*\*\*\* \*\*\*\*\*\*\*\*\* 

91119065 QY KF

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291A1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12499.00 UNITS: UG

L.E.HD

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. 1AB1

ACQUISITION DATE: 9JAN80 1841:47 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: \* SHAPE PARAMETER : 15.0 % 618. SEC ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

:4:

DETECTOR: GEL.1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

0.5003803 KEV/CHNL: \* HALF LIFF RATIO: 8.00 OFFSFT: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4:

• ELEMENT	PEAK ENERGY BK	GND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-ANTIMONY	511. 1 4 564. 2 3 657. 4	772. 13	3750.	Ø. 568Ø	0.0018	0. I
1009: 178. 1018: 394. 1027: 426.	<b>629</b> . 843	. 186. . 1106. . 176.	213. 1296. 173.		34. 965.	288. 554. 1.81.
<b>1</b> 126: 8494.		. 32204.	26251.	13066. 390	38. 714.	3190. 144. 88.
1310: 38. 1319: 28.	38. 40 33. 32 36. 28 ULSE-P1LE-UP	. 41. . 41.	41. 29.	31. 29.	27. 28.	
PK IT EMER		BKGND	FWHM	CHANNEL LEF		'SEC: XERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	24 133750. 89 8387.	3772.	2.88 1.96 1.99 2.03	1022.62 101: 1128.81 111: 1206.05 119 1292.33 128:	3	9E 02 0.3 3E 01 1.2

\*\*\*\*\*\* 10 | 1980 12:54:03 PM \*\*\*\* \*\*\*\*\*\* 

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291A2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 15826.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. 1 HB1

\*

ACQUISITION DATE: 9JAN80 1852:17 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00 -0.5932283 KEV OFFSET:

\* ABUNDANCE LIMIN: 85.00%

ELEMENT	PEAK ENERGY	BKGNI	D F	IREH	CONCE		1 SIGMA ERROR	%ER	ROR
2-copper %-ANTIMONY %-ARSENIC	511. 1. 564. 2 657. 4	497 538: 55	5. 170	k952. 1794. 0. <	0. 573		0. 0012 0. 0017 NOT DETI		1. 7 0. 3 E
1009: 24 1018: 53 1027: 50	9. 762.	1045.	1409.	250. 1665. 245.	265. 1605. 229.	299. 1565. 233.	318. 1121. 210.	410. 773. 231.	
• 1117: 39 1126:1115 1135: 16	Ø. 22897.	461. 35660. 131.	530. 41591. 142.	529. 32992. 129.	608. 16849. 108.	770. 4969. 116.	1508. 943. 95.	4011. 251. 108.	
	Ø. 43.	51. 30.	49. 38.	43. 31.	44.	50. 30.	44. 45.	41. 47. 51.	
PK IT EN	ERGY AF	REA B	KGND	FWHM	CHANNEL	LEFT F	W CTSZ	SEC	%ERR
• 2 1. 56 3 1. 60	1.10 89 4.24 1707 2.90 103 5.97 6	<sup>2</sup> 94. 895.	4977. 5385. 1296. 720.	2. 90 1. 96 1. 98 2. 07	1022. 62 1128. 80 1206. 07 1292. 14		21 1.492 20 2.847 16 1.732 15 1.127	E 02 E 01	1.5 0.2 1.1 6.8

\*\*\*\*\* 10 ( 1980 12:55:11 PM \*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8756. 000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

UG

ACQUISITION DATE: 9JAN80 1902:55 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SENSITIVITY: 600. SEC 5.000 ELAPSED REAL TIME: 61.3. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

DETECTOR: GEL1-8

\* LIBRARY: NUCL. L181 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4:

● ELEMEMI.	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
W-ANTIMONY	564. 2	2817.	96411.	0. 0709 0. 5866 0. 0049	0. 0021	0.4
		136. 126. 577. 816. 182. 132.	885.	968. 777	2. 158. <sup>2</sup> . 642. 4. 112.	431.
• 1117: 200. 1126: 6152 1135: 61.	13121. 20	228. 271. 9017. 23383. 65. 61.		9519. 2722		105.
1310: 23 1319: 30	21. 16.	21. 21. 20. 25. 16. 22. -UP CORRECTI	23. 22.	27. 26	i. 16.	
PK IT EME				CHANNEL LEFT		SEC ZERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	. 24	1. 2636. 1. 281.7. 3. 1066. 1. 537.		1022.60 1012 1128.81 1119 1206.07 1195 1292.31 1282	21 8,269 19 1,607 29 1,015 19 5,355	E 02 0.3

10 🕶 \*\*\*\*\* i 1980 12:56:19 PM \*\*\*\* • 

91119065 OY RF

SAMPLE DATE: 8JAM80 1048:00

LEAD

SAMPLE IDENTIFICATION: TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 13440,00 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

UNITS:

UG

9JAN80 1913:22 \* FWHM(1332) ACQUISITION DATE: 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 61.9. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

:4:

DETECTOR: GEL I-8 \* LIBRARY: NUCL. LIB1

DATE CHLIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		SIGMA ERROR	%ERROR
<pre>%-COPPER %-ANTIMOMY %-ARSENIC</pre>	564. 2	4955.	8382. 144417. 0	0. 57X	j i	9. 9918	0. B
	683.		238. 217. 283. 1534. 217. 188.	1550.	230. 1351. 191.		328. 700. 162.
• 1117: 326. 1126: 9381. 1135: 97.		474. 0129. 34 101.		14173.			3449. 156. 80.
1310: 34. 1319: 37.	38. 34.	39. 33.	33. 37. 44. 60. 34. 41 ECTED DATA	. 46. . 36.	40. 32.	38. 29.	37. 32. 25.
PK IT ENER	:GY ARE	A BKG	ND FWHM		LEFT PW		EC XERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	24	0. 12	55. 1.97 48. 2.01.	1022.61: 1128.80: 1206.08: 1292.36:	1120 1 1198 2	6 1.397E 8 2.407E 3 1.472E 6 8.944E	02 0.3 01 1.2

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029182

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 14726.00

5.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 9JAN80 1923:55 \* FWHM(1332) 2.390
PRESETTIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPF PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

:†:

DETECTOR: GFL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

\* ABUNDANCE LIMIT: 85.00%

• ELEMENT	PEAK ENERGY	BKGND (	AREA	CONCE		. SIGMA ERROR	XERROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>		5757. 1.60	9086. 9430. 0. <	Ø. 583	26	0.0013 0.0017 NOT DETE	Ø. 3
1009: 256. 1018: 527. 1027: 509.	777. 1. 355. :	231. 237. 058. 1.428. 274. 228. 490. 532.	244. 1680. 191. 525.	243. 1743. 190. 561.	257. 1502. 203. 742.	329. 1054. 210. 1424.	380. 751. 211. 3843.
<ul><li>1126:10336.</li><li>1135: 160.</li><li>1301: 47.</li></ul>	1.27.	254. 39014. 104. 104. 53. 49.	31.403. 86.	16046. 98.	4770. 85.	874. 85.	206. 92.
1310: 37. 1319: 32.	38. 40.		46. 40.	49. 36.		34. 53. 41. 1. 000	
PK IT EMFR	:GY AREA	BKGND	FWHM	CHANNEL	LEFT P	4 C:TS/S	EC ZERR
1. 1. 511. 2 1 564. 3 1 602. 4 1 645.	25 1.60430 91 9764	5757. 1143.	1. 96 2. 03	1022, 54 1128, 82 1206, 08 1292, 00	1.120 1	21 1.514E 19 2.674E 18 1.627E 14 1.024E	02 0.3 01 1.1

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029183

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 9441,000

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE WAME: EFF. TABL

:+:

UNITS:

UG

ACQUISITION DATE: 9JAN80 1934:30 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SFC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR	1 SIGMA . FRROR	ZERROR
• %-COPPER %-ANTIMONY %-ARSENIC	564. 2	2848.	95995.	0. 5447	0.0016 0.0020 NOT DET	0.4
1009: 128. 1018: 319. 1027: 279.		137. 14 629. 87 154. 15		1074.	158. 175. 892. 674. 133. 138.	
<ul> <li>1117: 212</li> <li>1126: 6111</li> <li>1135: 49</li> </ul>	12885. 2	278. 27 0058. 2312 57. 5		9438. 2		2213. 78. 58.
1310: 23. 1319: 22.	15. 18.	17. 2 20. 2 30. 1 -UP CORREC	4. 28. 5. 23.	20. 29. 23. CORRECTIO	26. 25. 21. 19.	22. 22. 21.
PK IT EMER	GY ARE	A BKGND	FЫНМ	CHANNEL LE	FT PW CTS/	'SEC XERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	25 9599 92 577	5. 2848 6. 653	1.96 2.02	1022.56 10 1128.82 11 1206.10 11 1292.20 12	20 17 1.600 96 18 9.626	0E 02 0.3 3E 00 1.5

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029101

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 14763.00

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

**>** 

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UMITS:

UG

ACQUISITION DATE: 9JAN80 1944:56 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

• ELEMENT	PEAK ENERGY	BKGND I	AREA	CONCENT	1 SIGI R. ERROI		ROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>		5490. 19	5973.	0. 71.61	0. 00: 0. 00: NOT I	20 (	ð. R
	626. E	97. 1095.	298. 1325. 264.	1270.	273. 32: 1146. 90: 265. 23:	9. 612.	
• 1117: 375. 1126:12579. 1135: 165.		62. 47679.		679. 19267. : 141.		3. 4742. 5. 275. 4. 132.	
1310: 46. 1319: 52.		48. 54. 58. 57.	64. 61.	45. 48.	50. 5. 49. 5	3. 61. 4. 56.	
PK IT ENER	:GY AREA	BKGND	FЫНМ	CHANNEL LE	EFT PW C	1S/SFC ;	YERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	24 196973. 87 12284.	5896. 5490. 1612. 1951.	1. 96 1. 98	1022, 54 10 1128, 81 1: 1206, 01 1: 1292, 34 1:	118 20 3.; 196 22 2.;	283E 02	2. 2 3. 2 1. 0 9. 1

91119065 QY KF

L.EAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291C2

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 8840.00

SAMPLE QUANTITY: 8840.000 SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE NAME: EFF. TABI

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UNITS:

UG

ACQUISITION DATE: 9JAN80 1955:34 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:**†**:

DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

:1:

ELEMENT	PEAK ENERGY	, BKG	ND	AREA	CONCEN		1 SIGMA ERROR	ZER	ROR
%-ANTIMON'		2 32	56. 11	5507.	9. 793				
%-ARSENIC	657. 4	1 3	:42.	Ø. <	: 0.005	i3	NOT DET	ECTABL	.E
1009: 10	55. 1.64.	154.	174.	155.	158.	183.	223.	212.	
1018: 20	58. 402.	558.	701.	894.	856.	725.	598.	389.	
1027: 29	97. 198.	179.	132.	111.	131.	1,45.	150.	155.	
1117: 2:	l.4. 266.	268.	296.	324.	419.	566.	978.	2637.	
1126: 73	36. 15371	24025.	27471	22647.	11560.	3424.	615.	116.	
1135: (	83. 85.	74.	60.	56.	56.	66.	70.	48.	
1301: :	28. 19.	28.	27.	31.	25.	28.	26.	21.	
1310:	31. 23.	25.	36.	26.	28.	28.	30.	26.	
	24. 15.						21.	26.	
!	PULSE-P	LLE-UP C	:ORREC:TE	D DATA.	CORRECT	ICIN =	1 000		
PK IT E	VERGY F	AREA	PKGND	FWHM	CHANNEL.	LEFT F	W CTS/	'SEC	ZERR
1 1 5:	L1.09	<b>4171</b> .	3487.	2. 88	1022. 59	1013	22 6. 952	E 88	2. 5
2 1. 5	54. 25 <b>11</b> 5	5507.	3256.	1. 98	1.128. 82		22 1. 925		0.3
3 1 6		7380.	1125.	1. 99	1206.07		26 1. 230		1. 3
4 1. 6	45. 95	443.	660.	1. 91	1292. 10	1281,	19 7.387	'E-01	9. 5

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291C3

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 12373.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 9JAN80 2006:04 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS:

**:**†:

:+:

DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KY

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

UNKNOWM SAMPLE REPORT

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1.

1.

2

3

4

5

564. 24

602, 89

646. 09

668, 89

159643.

9880.

615.

144.

ELEMENT		PEAK ENERGY	BKG	ND I	AREA	CONCE		1 SIGMA ERROR	ZEF	ROR
%-corre	R	511. 1	37	67.	5517.	ø. ø59	91	0. 0013		2. 2
X-ANTIM		564. 2	43	30. 15	9643.	ø. 695	54.	0. 0021		Ø. 3
%-ARSEN	IC	657. 4	4	90.	Ø. <	. 0.004	<del>1</del> 5	NOT DET	ECTABL	E
1009:	249.	239.	223.	195.	214.	203.	239.	256.	305.	
1018:	344.	517.	691.	955.	1099.	1065.	925.	783.	521.	
1027:	349.	270.	248.	212.	193.	191.	195.	236.	218.	
1117:	325.	344.	373.	433.	451.	551.	763.	1441	3839.	
1126:1	0043.	21572.	33155.	38609.	31019.	15746.	4590.	867.	213.	
1135:	1.25.	1.20.	99.	98.	97.	101.	84.	99.	95.	
1301:	43.	46.	39.	45.	44.	46.	41.	41.	27.	
1310:	49.	30.	42.	35.	41.	43.	48.	41.	33.	
1319:	26.	34.	41.	31.	33.	42.	44.	32.	49.	
	F	'ULSE-PII	_E-UP C	ORRECTE	D DATA.	CORRECT	rion =	1.000		
PK IT	ENER	GY A	REA	BKGMD	FЫНМ	CHANNEL	LEFT F	W CTS/	'SEC	ZERR
1 1.	511.	<b>08</b> 5:	547.	3767.	2. 89	1022. 56	1013	19 9.195	E 00	2. 1.

1.96

1.99

1.98

2, 39

1128.81 1118

1206.06 1196

1292.37 1284

1337. 77 1333

20 2.661E 02

20 1.647E 01

19 1.026E 00

11 2.405E-01 21.3

0.3

1. 1

4330.

1.170.

846.

402.

\*\*\*\*\*\* 10 4 1980 1:03:08 PM \*\*\* \*\*\*\*\*\*\*\* 

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q291D1

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 10756.00

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

UNITS:

UG

ACQUISITION DATE: 9JAN80 2016:38 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GEL1-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

0.5003803 KEV/CHNL:

\* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1

657. 38

175.

575.

PEAK ENERGY	BKGr	4D	AREA 	CONCEN		1 SIGMA ERROR	ZER	ROR
					)6	9. 0 <b>01</b> 5		2. 2
						0. 0021 0. 0018		0. 3 21. 0
199.	194.	183.	219.	204.	210.	217.	264.	
	706.	886.					518.	
267.	190.	189.	200.	179.	168.	164.	192.	
555.	606.	626.	589.	562.	653.	1142.	3146.	
17735.	27633.	321.88.	25852.					
82.	74.	78.	95.	98.	80.	75.	69.	
35.	30.	32.	23.	75	27	77	74	
	28.	30.						
PULSE-PIL						***************************************		
RGY AF	REA E	BKGND	FЫНМ	CHANNEL	LFFT F	W CTS/	SEC	%ERR
. 08 56	77.	3801.	2. 94	1.022, 57	1.012	21 9 462	E BB	2. 0
	.99.	1194.	2. 19	1120.86	1109			3. 1
. 25 1336	70.	819.	1. 97					0.3
	553.	932.	2. 01	1206. 97	1197	18 1. 425		1. 2
. 1.1. 5	578.	574.	2. 18	1292.43	1286	17 9.636	E-01	7. 2
	ENERGY  511. 1 564. 2 657. 4  199. 541. 267. 555. 17735. 82. 35. 35. 40. PULSE-PIL RGY AF 26 21 25 1336	ENERGY BKGM 511. 1 386 564. 2 82 657. 4 57 199. 194. 541. 706. 267. 190. 555. 606. 17735. 27633. 82. 74. 35. 30. 35. 34. 40. 28. PULSE-PILE-UP CORGY AREA 6 188 5677. 26 2199. 25 133670. 90 8553.	ENERGY BKGND  511. 1 3801. 564. 2 819. 13 657. 4 575.  199. 194. 183. 541. 706. 886. 267. 190. 189. 555. 606. 626. 17735. 27633. 32188. 82. 74. 78. 35. 30. 32. 35. 34. 50. 40. 28. 30. PULSE-PILE-UP CORRECTE RGY AREA BKGND  08 5677. 3801. 26 2199. 1194. 25 133670. 819. 90 8553. 932.	ENERGY BKGND AREA  511. 1 3801. 5677. 564. 2 819. 133670. 657. 4 575. 175.  199. 194. 183. 219. 541. 706. 886. 1098. 267. 190. 189. 200.  555. 606. 626. 509. 17735. 27633. 32188. 25852. 82. 74. 78. 95. 35. 30. 32. 23. 35. 34. 50. 65. 40. 28. 30. 28. PULSE-PILE-UP CORRECTED DATA.  RGY AREA BKGND FWHM  08 5677. 3801. 2. 94. 26 2199. 1194. 2. 19. 25 133670. 819. 1. 97. 90 8553. 932. 2.01	ENERGY BKGND AREA CONCEN- 511. 1 3801. 5677. 0.070 564. 2 819. 133670. 0.670 657. 4 575. 175. 0.008 199. 194. 183. 219. 204. 541. 706. 886. 1098. 1072. 267. 190. 189. 200. 179. 555. 606. 626. 509. 562. 17735. 27633. 32188. 25852. 13352. 82. 74. 78. 95. 98. 35. 30. 32. 23. 35. 35. 34. 50. 65. 69. 40. 28. 30. 28. 22. PULSE-PILE-UP CORRECTED DATA. CORRECTED	ENERGY BKGND AREA CONCENTR.  511. 1 3801. 5677. 0.0706 564. 2 819. 133670. 0.6708 657. 4 575. 175. 0.0086  199. 194. 183. 219. 204. 210. 541. 706. 886. 1098. 1072. 967. 267. 190. 189. 200. 179. 168.  555. 606. 626. 509. 562. 653. 17735. 27633. 32188. 25852. 13352. 4012. 82. 74. 78. 95. 98. 80.  35. 30. 32. 23. 35. 27. 35. 34. 50. 65. 69. 63. 40. 28. 30. 28. 22. 38.  PULSE-PILE-UP CORRECTED DATA. CORRECTION =  RGY AREA BKGND FWHM CHANNEL LEFT F	ENERGY BKGND AREA CONCENTR. ERROR  511. 1 3801. 5677. 0.0706 0.0015 564. 2 819. 133670. 0.6708 0.0021 657. 4 575. 175. 0.0086 0.0018  199. 194. 183. 219. 204. 210. 217. 541. 706. 886. 1098. 1072. 967. 745. 267. 190. 189. 200. 179. 168. 164.  555. 606. 626. 509. 562. 653. 1142. 17735. 27633. 32188. 25852. 13352. 4012. 727. 82. 74. 78. 95. 98. 80. 75.  35. 30. 32. 23. 35. 27. 33. 35. 34. 50. 65. 69. 63. 50. 40. 28. 30. 28. 22. 38. 21.  PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000  RGY AREA BKGND FWHM CHANNEL LEFT PW CTS/ 26 2199. 1194. 2.19 1120.86 1109 29 3.664. 25 133670. 819. 1.97 1128.82 1109 29 2.228. 90 8553. 932. 2.01 1206.07 1197 18 1.425	ENERGY BKGND AREA CONCENTR. ERROR ZER  511. 1 3801. 5677. 0.0706 0.0015 564. 2 819. 133670. 0.6708 0.0018 2 657. 4 575. 175. 0.0086 0.0018 2 199. 194. 183. 219. 204. 210. 217. 264. 541. 706. 886. 1098. 1072. 967. 745. 518. 267. 190. 189. 200. 179. 168. 164. 192. 555. 606. 626. 509. 562. 653. 1142. 3146. 17735. 27633. 32188. 25852. 13352. 4012. 727. 185. 82. 74. 78. 95. 98. 80. 75. 69. 35. 30. 32. 23. 35. 27. 33. 34. 35. 34. 50. 65. 69. 63. 50. 40. 40. 28. 30. 28. 22. 38. 21. 40. PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000  RGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC  08 5677. 3801. 2.94 1022. 57 1012 21 9.462E 00 26 2199. 1194. 2.19 1120.86 1109 29 3.664E 00 25 133670. 819. 1.97 1128.82 1109 29 2.228E 02 90 8553. 932. 2.01 1206.07 1197 18 1.425E 01

2. 13 1314. 94 1307 1.9 2. 912E-01 20 R

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029102

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 1.6584.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABA.

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UG

ACQUISITION DATE: 9JAN80 2027:09 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

:#:

\*

• ELEMENT	PEAK ENERGY	EKGNE	)   	AREA	CONCE	ITR:.	1. SIGMA ERROR	ZER	ROR 
2-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 2 657. 2	6958 1812 884	2. 241	9294. 7393. 451.	0. 075 0. 806 0. 014	57	0. 0014 0. 0020 0. 0016		1. 8 0. 3 0. 7
1009: 371. 1018: 625. 1027: 627.	893.	366. 1143. 389.	334. 1561. 378.	345. 1831. 339.	368. 1800. 336.	383. 1629. 342.	469. 1227. 295.	543. 873. 291.	
• 1117: 966. 1126:16157. 1135: 257.	33631.	1410. 51154. 5 241.	1313. 59244. 229.	1079. 47574. 221.	942. 24031. 166.	1151. 7281. 168.	1445.	6060. 382. 185.	
1301: 81 1310: 75 1319: 68	77.	71. 94. 63. E-UP COM	72. 141. 95. RECTE	91. 167. 72. D DATA.	68. 177. 60. CORRECT	67. 121. 71. FION =		76. 92. 80.	
PK IT ENE	RGY AR	EA BI	<gnd< td=""><td>FЫНМ</td><td>CHANNEL</td><td>LEFT F</td><td>PW CTS/:</td><td>SEC:</td><td>ZERR</td></gnd<>	FЫНМ	CHANNEL	LEFT F	PW CTS/:	SEC:	ZERR
1 1 511. 2 3 560. 3 3 564. 4 1 602. 5 1 646. 6 1 657. 7 1 668	.22 49 .23 2473 .90 156 .12 11	20. 3 93. 3 62. 3 34. 3	5958. 2711. 1812. 2002. 1415. 884. 867.	2. 87 2. 42 1. 98 2. 01 2. 17 2. 02 2. 59	1022, 57 1120, 76 1128, 79 1206, 08 1292, 44 1314, 56 1336, 70	1108 1108 1197 1283 1308	22 1. 549 35 8. 200 35 4. 123 1.7 2. 610 20 1. 891 13 7. 510 12 3. 230	E 00 E 02 E 01 E 00 E-01 1	1.6 2.1 9.9 9.6 5.6

91119065 QY RF LEAD

SAMPLE DATE: SJAN80 1048:00 SAMPLE IDENTIFICATION: 0291D3

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 14907.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

:+:

LIG

ACQUISITION DATE: 9JAN80 2037:54 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SFNSITIVITY: 5.000 ELAPSED REAL TIME: *626.* SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBS

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

• ELEMENT	PFAK ENERGY	BKGND	AREA	CONCEN		SIGMA ERROR	ZERROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>	564. 2	1433.	186773.	9. 678:	3	0. 0019	2. 2 0. 3 23. 0
1009: 281. 1018: 475. 1027: 486.	651.	933. 1	294. 278. 242. 1.432. 277. 264.	1349.	282. 1215. 234.	989.	333. 681. 232.
• 1117: 622. 1126:12067. 1135: 160.	24811.	38951. 45	814. 747. 190. 36333. 146. 136.	18201.		1069.	4345. 280. 90.
1310: 48. 1319: 41.	64. 42.	46. 42.	55. 60. 86. 85. 56. 53. ECTED DATA	97. 50.	87. 49.	68. 44.	52.
PK IT ENER	KGY ARI	EA BKG	МО БИНМ	CHANNEL I	LEFT PW	CTS/9	EC ZERR
1 1 511. 2 2 562. 3 2 564. 4 1 602. 5 1 646. 6 1 657.	14 325 24 1867 90 116 09 8	56. 20 73. 14 22. 13 11. 10	26. 2.40 33. 1.96 50. 1.97 45. 2.29	1022, 53 : 1124, 62 : 1128, 81 : 1206, 07 : 1292, 37 : 1314, 56 :	1111 3 1111 3 1196 1 1285 2	:6 1.1906 :5 5.4276 :5 3.1136 :8 1.9376 :2 1.3526 :7 3.2536	00 2.6 02 0.2 01 1.0

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291E1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 16118.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

:+:

ACQUISITION DATE: 9JAN80 2048:33 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:4:

DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN		1. SIGMA ERROR	%ERROR
<pre>%-COPPER %-ANTIMONY %-ARSENIC</pre>	564. 2		193724.			0.0018	<b>0</b> . 3
1009: 306 1018: 473 1027: 483	691.	268. 27 955. 115 308. 25	6. <mark>135</mark> 8.	1420.	331. 1320. 233.	995.	403. 730. 269.
• 1117: 568 1126:12378 1135: 192	. 26009. 4			19207.			4526. 263. 130.
1310: 44. <b>1</b> 319: 52	. 62. . 53.	44. 5 57. 6 49. 5 -UP CORREC	4. 78. 1. 48.	89. 55.	77. 55.	52. 45.	54. 46. 46.
PK IT ENE				CHANNEL I			SEC %ERR
1 1 511 2 2 560 3 2 564 4 1 602 5 1 645 6 1 656	.19 208 .24 19372 .89 1.207 .99 72	9. 1902 4. 1417 1. 1568 8. 2023	. 2.21 . 1.97 . 2.00 . 1.99	1022, 68 : 1120, 72 : 1128, 80 : 1206, 05 : 1292, 18 : 1313, 75	1109 : 1109 : 1195 : 1286 :	21 1.245E 29 3.482E 29 3.229E 19 2.012E 29 1.214E 9 1.919E	00 3.7 02 0.2 01 1.0 00 9.5

91119065 QY RF LEAD

SAMPLE DATE: 8JAM80 1048:00 SAMPLE IDENTIFICATION: 0291E2

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 10390.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TABI

:4:

UG

ACQUISITION DATE: 9JAN80 2059:11 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

,

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KY

• ELEMENT	PEAK ENERGY	BKGMD	AREA:	CONCENTR.	1 SIGMA ERROR	%ERROR
2-COPPER X-ANTIMONY X-ARSENIC	564. 2	826. 1	25885.	Ø. 6589	0.0016 0.0021 NOT DET	Ø. I
<b>1018:</b> 315.	451.	591. 76 <i>6</i>	. 905.	904. 7	90. 229. ′93. 626. .49. 158.	413.
• 1117: 359. 1126: 7906. 1135: 102.	16804. 26	216. 30215	. 24597.	12415. 37	194. 1065. 160. 617. 70. 60.	155.
	33. 27.	37. 48 36. 26	. 50. . 25.	48.	49. 43. 30. 28.	23.
PK IT ENER		BKGND			· · ··································	'SFC XERR
1 1 511. 2 2 564. 3 2 590. 4 1 602. 5 1 646.	<ul><li>74 125885</li><li>69 1955</li><li>91 7987</li></ul>	. 1294.		1022, 53 101 1128, 82 118 1181, 67 118 1206, 09 119 1292, 58 128	97 30 2.098 97 30 3.258 94 25 1.331	3E 02 0.3 3E 00 2.2 LE 01. 1.3

\*\*\*\*\*\* 10 1980 1:09:06 PM \*\*\*\* \*\*\*\*\* 

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291ER

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 13367.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 9JAN80 2109:42 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

\* HALF LIFE RATIO: 8.00

\* LIBRARY: NUCL. LIB1

KEY/CHNL: 0.5003803

OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	··· ···· ··· ··· ···· ···· ···· ···· ····	PEAK ENERGY	BKG	MD	AREA	CONCE	VTR.	1 SIGMA ERROR	%ER	ROR
<ul><li>%-COPPER</li><li>%-ANTIMO</li><li>%-ARSENI</li></ul>	JWY	511. 0 564. 2 657. 4	41: 11. 4:	40. 16	6294. 4932. 155.	0. 066 0. 673 0. 006	23	0. 001.4 0. 0020 0. 0013		2. 1 0. 3 0. 6
1009: 1018: 1027:	261. 414. 409.	235. 594. 302.	226. 821. 226.	233. 1065. 229.	202. 1196. 206.	1169.	243. 1077. 216.	793.	342. 628. 1.89.	
• 1117: 1126:10 1135:	460. 3440. 1.39.	591. 21930. 123.	712. 34226. 109.	632. 39592. 124.	627. 32155. 110.	16277.	802. 4901. 119.	918.	3843. 207. 76.	
• 1301: 1310: • 1319:	40. 39. 46. PH	50. 44. 37.    SE-PT	43. 39. 42. F-UP C	39. 57. 39. ORRECTE	33. 66. 40. D DATA.	81. 35.	45. 58. 38.	54.	38. 44. 45.	
PK IT	ENERG			OKKEOTE BKGND	г ингн. Емни	CHANNEL			SEC	ZERR
<ul><li>3 2</li><li>4 1.</li></ul>	511. 9 563. 2 564. 2 602. 5 646. 9 657. 4	90 23 94 1649 90 100 96 6	151.	4147. 1554. 1140. 1392. 724. 429.	3.00 2.41 1.97 1.99 1.97 2.06	1022, 51 1126, 73 1128, 82 1206, 08 1292, 33 1315, 04	1109 1109 1198 1286	19 1.049 29 3.906 29 2.749 19 1.675 15 1.063 11 2.590	F 00 E 02 E 01 E 00	1. 9 3. 2 0. 2 1. 1 7. 2

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: Q291F1

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 8801.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 9JAN80 2120:16 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:4

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

• ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC		3672.	4058. 121149. 0. <		0. 0025	Ø. 3
1009: 167 1018: 269 1027: 299	9. 401.	524. <u>6</u>	163. 166. 593. 843. 146. 159.	838. 72		239. 398. 182.
• 1117: 262 1126: 7664 1135: 92	l 16120. 3		337. 382. 234. 23837. 69. 70.	12115. 365	5. 692.	
<b>. 1</b> 319: 24	9. 20. 4. 27.		27. 34. 28. 32.	32. 2	7. 30.	
PK IT EME	FRGY ARE	EA BKGI	ND FWHM	CHANNEL LEFT	PW CTS/	SEC ZERR
<ul> <li>2 1 56</li> <li>3 1 602</li> </ul>	L. 07 405 4. 25 12114 2. 91 761 5. 07 53	49. 367 36. 82	72. 1.96 24. 1.96	1022.54 1014 1128.83 1120 1206.09 1197 1292.34 1287	)	E 02 0.3 E 01 1.3

91119065 QY RF

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SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291F2

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10838.00 UNITS: UG

L.EAD

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

:+:

ACQUISITION DATE: 9JAN80 2130:46 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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:4:

DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CY79 1434:06 \* FNERGY TOLERANCE: 2.000KY

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ł:

• ELEMENT	PEAK ENERGY	PKGND	AREA	CONCENT		SIGMA RROR 	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 3 657. 4	3960. 3800. 467.	4873. 136975. 0. <	0. 0643 0. 6912 0. 0052	: Ø.	0016 0022 OT DETECT	2. 5 Ø. 3 ABL.E
1009: 201 1018: 324 1027: 338	474.	663. 8	.90. 194. :15. 991. 80. 192.		205. 853. 165.	627. 4	260. 170. 57.
<ul><li>1117: 277</li><li>1126: 8591</li><li>1135: 90</li></ul>	. 18277. 2	299. 3 8232. 329 92.	:70. 432. 927. 27027. 73. 79.	475. 13757. 80.	610. : 4184. 89.		128. .58. 70.
• 1301: 50 1310: 44 • 1319: 36	. 31	28.	30. 40. 41. 35.	39. 30.	34. 44. 31.	31. 41. 36. 000	28. 36. 35.
	RGY ARE			CHANNEL L		CTS/SEC	: %ERR
<ul><li>2 1 564</li><li>3 1 602</li></ul>	.05 487 .25 13697 .91 888 .11 57	'5. 380 '9. 107	90. 1.97 76. 1.99	1022.50 1 1128.84 1 1206.10 1 1292.42 1	.119 19 195 21	2. 283E @	00 2.3 02 0.3 01. 1.2 01. 7.0

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291F3

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 13483.00

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:†:

UNITS:

UG

ACQUYSITION DATE: 9JAN80 2141:16 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

+:

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

• ELEMENT	PEAK ENERGY I	SKGND I	AREA	CONCENTR		1GMA ROR %EI	ROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>		5250. 17	0812.	0.6941	ØI.	0014 0020 T DETECTABI	0. B
1009: 262. 1018: 430. 1027: 426.	581. 7	37. 1025.	229. 1193. 205.	1167. 1	264. 103. 21.2.		
• 1117: 382. 1126:10989. 1135: 164.	22760. 353:	97. 41599.			782. 1 041. 108.		
1310: 33. 1319: 38.		§6. 44. §4. 39.	51. 42.	43. 37.	59. 41.	40. 45.	
PK IT ENER		BKGND		CHANNEL LE		CTS/SEC	%ERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	24 170812. 89 10854.	5250.	1., 96 2. 00	1022. 64 10 1128. 82 11 1206. 06 11 1292. 45 12	.18 20 .96 18	9.894E 00 2.847E 02 1.809E 01 1.204E 00	2. 0 0. 2 1. 1 6. 8

91119065 OY RF

SAMPLF DATE: 8JAN80 1048:00 SAMPLF IDENTIFICATION: Q291G1

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 13510.00 UNITS: UG

L.EAD

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 9JAN80 2151:51 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KY

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCF LIMIT: 85.00%

• ELEMENT	PEAK ENERGY	BKGMI	) f	HREA	CONCE		1 SIGMA ERROR	%EF	ROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	511. 1 564. 2 657. 4				9. 988 9. 562 9. 994	- •••			1.8 0.3 E
1009: 202 1018: 427 1027: 448	611.	210. 960. 237.	211. 1279. 198.	198. 1530. 196.		228. 1326. 165.	997.	329. 687. 196.	
• 1117: 317 1126: 8743 1135: 111	. 18479.	447. 28986. : 97.	405. 3662. 76.	470. 26933. 78.	473. 14096. 84.	679. 4304. 87.	811.	3101. 182. 62.	
<b>1319: 37</b>	33.	38. 24.	47. 41.	48. 33.	33.	45. 22.		35. 36. 38.	
• PK IT ENE	RGY AR	EA BI	KGND	FWHM	CHAMNEL	LEFT F	W CTS/	SEC	%ERR
<ul><li>2 1. 564</li><li>3 1 602</li></ul>	. 91	06.	4221. 4779. 900. 638.	2.86 1.96 1.99 2.01	1022, 58 1128, 83 1206, 09 1292, 30	1.120 11.98	23 1, 359 19 2, 307 16 1, 432 15 9, 655	E 02 E 01	1. 6 0. 3 1. 2 7. 4

\*\*\*\*\*\* 10 1980 1:14:41 PM \*\*\*\* \*\*\*\*\*\* 

9111.9065 QY RF L.EAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029162

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 8610, 000

SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE NAME: EFF. TAB1

\*

UNITS:

UG

ACQUISITION DATE: 9JAN80 2202:21 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR TIERATIONS: 10.

\*

DETECTOR: GFL1-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY E	KGMD	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
<pre>%-corper %-ANTIMONY %-ARSENIC</pre>		2912. 8		ø. 5571		0. 4
1009: 143. 1018: 268. 1027: 268.	384. 55	33. 140. 58. 779. 59. 126.			146. 167. 776. 617. 92. 112.	413.
• 1117: 194. 1126: 5498. 1135: 50.			17166.	8961 2		98.
1310: 17. 1319: 19.	17. : 15. : 23. ULSE-PILE-U	19. 36. 24. 12.	22. 17.	23. 26. 17. CORRECT10	29. 19. 18. 19.	
PK IT ENER	GY AREA	BKGND	FЫНМ	CHANNEL LEI	-T PW CTS/	YSEC %ERR
1 1 511. 2 1 564. 3 1 602. 4 1 646.	26 87213. 92 5500.	2265. 2912. 537. 332.	1. 97 1. 92	1022, 61 10: 1128, 84 11: 1206, 11 11: 1292, 50 12:	20 18 1.454 96 19 9.167	#E 02 0.3 PE 00 1.5

91119065 QY RF

SAMPLE DATE: SJANSO 1048:00

L.EAD

SAMPLE IDENTIFICATION: 0291G3 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7862,000 SAMPLE GEOMETRY: .25 1N

EFFICIENCY FILE MAME: EFF. 1AB1

+:

UNITS:

UG

### ACQUISITION DATE: 9JAN80 2212:47 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00% \*

ELEMENT	PEAK ENERGY	' BKGM	<b>I</b> D	AREA	CONCER		1 SIGMA ERROR	ZERROR
X-ANTIMON	511. 1 Y 564. 3 657. 4	258	38. 7		0. 526	6		2. 3 0. 4 ECTABLE
1018: 2	.14. 97. 147. 337. 166. 1.30.				1.1.1. 852. 94.	668.	499.	174. 381. 95.
1126: 47		15523.	18048.	14888.	274. 7790. 42.	2329.		1682. 74. 47.
1310:	1.5. 1.6.	15.	28. 1.7.	25. 15.		23. 16.	18.	15. 18. 13.
PK IT E			BKGND		CHANNEL			SEC XERR
2 1 5 3 1 6	164. 26	1255. 3137. 1824. 306.	2021. 2588. 502. 594.	2. 81 1. 97 1. 97 1. 84	1022. 61 1128. 85 1206. 16 1292. 13	1120 1198	21 7.091 18 1.252 17 8.039 27 5.106	E 02 0.4 E 00 1.6

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291H1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11589.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 9JAN80 2223:09 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL.. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

\*

• ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
X-ANTIMONY	511. 1 564. 3 657. 4	4261. :	6176. 122516. 0. <			0.3
1009: 187. 1018: 348. 1027: 338.	522.	181. 176 735. 923 179. 176	2. 1081.	1197. 10	77. 203. 33. 769. 41. 163.	234. 579. 135.
<ul> <li>1117: 302</li> <li>1126: 7737</li> <li>1135: 105</li> </ul>	. 16088. 2	379. 378 5581. 2963; 72. 62	7. 24279.	12530. 36	71. 738.	2719. 180. 77.
	. 27. . 29.		7. 39. 2. 39.	36. 37.	42. 24. 30. 40. 25. 25. = 1.000	25. 33. 28.
PK IT ENE	RGY ARE	A BKGND	ЕМНМ	CHANNEL LEF	T PW CTS/	'SEC %ERR
1 1 511 2 1 564 3 1 602 4 1 646	. 26   12251 . 94   781	5. 4261. 9. 898.	1. 96 1. 97	1022, 69 101 1128, 84 112 1206, 14 119 1292, 32 128	0 19 2 043 6 19 1 303	?E 02 0.3 ?E 01 1.3

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291H2

TYPE OF SAMPLE: UMKNOWN
SAMPLE QUANTITY: 10350.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

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UG

### ACQUISITION DATE: 9JAN80 2233:39 \* FWHM(1332) 2.390
PRESET TIME(L1VF): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

.4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1:

•	ELEM	=			'EAK JERGY 	BK0	and	AREA	CONCE	VTR.	1 SI		%EF	RROR
	%-COI %-AN %-AR:	TIP	10144	:: -	511. 1 564. 3 557. 4	28 36		5821. 0152. 0. <	0.58	54 35 54	0. 9	920		0. I
•	100: 101: 102:	8:	174. 358. 338.		137. 481. 217.	141. 675. 198.	866.	172. 1979. 134.	1047.	170. 954. 132.	7	77. 34. 37.	235. 484. 142.	
•	113 113 113	6:	283. 6899. 79.	14	289. 1554. 73.	339. 22707. 65.	26796.	389. 21658. 67.	11437.	51.2. 3493. 60.	6	98. 65. 39.	2536. 142. 49.	
•	130 131 131	Ø:	23. 34. 26.		26. 33.	27. 21. 32. E-UP 0	22.	20. 38. 26. To DATA	35. 19.	30. 27.		33. 32. 25. aa		
•	PK	ΓĽ	ENE F		ři ř		BKGMD	<b>Г</b> ЫНМ		LEFT F		oo CTS/	SEC	ZERR
•	1 2 3 4	1. 1. 1.	511. 564. 602. 646.	26 94	58 1101 69	152. 941.	2856. 3645. 950. 472.	2. 91 1. 96 1. 99 2. 26	1022, 61 1128, 85 1206, 14 1292, 36	11.20 1196		. 836 . 157	E 02 F 01	1. 8 0. 3 1. 4 8. 9

91119065 QY RF LEAD

■ SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 0291H3

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 9178.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE MAME: EFF. TAB1

:4:

:4:

LIG

ACQUISITION DATE: 9JAN80 2244:06 \* FWHM(1332) 2, 390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GFL1-8 \* LIBRARY: NUCL.. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

\*

• ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
<ul><li>%-COPPER</li><li>%-ANTIMONY</li><li>%-ARSENIC</li></ul>	564. 3	3137.			0. 0021	0.4
1009: 152 1018: 293 1027: 281	388.	547. 7	47. 161. 54. 859. 32. 128.	856. 753	3. 175. 2. 641. 2. 121.	178. 418. 118.
<ul> <li>1117: 195</li> <li>1126: 5827</li> <li>1135: 66</li> </ul>	. 12267. 1		03. 18768.			100.
	. 20. . 30.	23. 14.	23. 34. 19. 20.	28. <u>3</u> 3	ð. 16.	
PK IT ENE	RGY ARE	A BKGN	D FWHM	CHANNEL LEFT	PW CTS/	SEC %ERR
1 1 511 2 1 564 3 1 602 4 1 645	. 27       9379 . 90       605		7. 1.96 4. 1.95	1022.64 1011 1128.86 1120 1206.07 1195 1292.06 1282	28 7.932 18 1.563 19 1.009 21 6.660	E 02 0.3 E 01 1.4

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029111

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 13041.00

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABL

:+:

UNITS:

UG

ACQUISITION DATE: 9JAN80 2254:31 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

DETECTOR: GELI-8

DETECTOR: GEL.I-8 \* LIBRARY:NUCL.L181
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

• ELEMENT	PEAK ENERGY	EKGND	) f	HREA	CONCER		1 SIGMA ERROR	XERROR
	511. 1 564. 3 657. 4	908	3. 129	9109.	Ø. 549	95	0.001.6 0.0018 NOT DETE	Ø. 3
1009: 21 1018: 42 1027: 37	3. 555.	181. 829. 203.	1097.		206. 1290. 1.66.		882.	
<b>1126: 818</b>			31007.	25374.	12921.	4019.	1075. 728. 73.	145.
1310: 3 1319: 3	3. 40. 77. 21. 3. 42.	36. 39.	28. 32.	33. 30.	42. 27.	37. 38.	37. 26.	37.
	PULSE-P1L JERGY AF						1.000 W CTS/9	SEC: %ERR
	0.30 10 4.25 1291 2.92 82 5.98 5	947. 3 139. 1 109. 44. 644. 77.	L217. 908. 954. 599.	2. 19 1. 96 2. 06	1022.60 1120.94 1128.83 1206.11 1292.17 1339.09	1111 1111 1196	21 1.158E 39 1.732E 39 2.152E 18 1.374E 21 9.060E 10 1.279E	00 5.7 02 0.3 01 1.2 -01 7.7

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029112

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 11122.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:†:

ACQUISITION DATE: 9JAN80 2305:02 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:1:

DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KY

• ELEMEN	T	PEAK ENERGY	8KG	ND i	AREA	CONCET	NTR.	1 SIGMA ERROR	ZEF	ROR
*-copp %-anti *-arse	MONY	511. 1 564. 3 657. 4	38	<b>0</b> 5. <b>1</b> 0	6046. 8529. 0. <	Ø. 542	26	0.0017 0.0019 NOT DET		2. 0 0. 3 E
1009: 1018: 1027:	326.	146. 479. 219.	126. 677. 161.	150. 911. 161.	162. 1108. 144.	1098.	169. 916. 124.	776.	241. 496. 1.22.	
• 1117: 1126: 1135:		324. 14393. 68.	339. 22414. 52.	338. 26442. 67.	341. 21524. 57.		525. 3283. 60.		2434. 133. 69.	
1301: 1310: 1319:	28. 26.	22.	25. 31. 28.	29. 33.	29. 35. 22.	22. 27.	27. 25.	28.	29. 30. 11.	
• PK IT				ORRECTE BKGND	D DATA. FWHM	CHANNEL		11.01	SEC	ZERR
1 1 2 1 3 1 4 1	. 564. . 602.	26 108 92 6	529. 974.	3200. 3805. 735. 497.	2. 91 1. 95 2. 01 1. 98	1022. 61 1128. 85 1206. 11 1292. 23	1120 1196	25 1.008 19 1.809 20 1.162 17 8.413	E 02 E 01	1.8 0.3 1.3 7.7

91119065 0Y RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: 029113

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 12805.00 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

**\*** 

:+:

UG

### ACQUISITION DATE: 9JAN80 2315:28 \* FWHM(1332) 2.390
| PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
| ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %
| ELAPSED LIVE TIME: 600. SEC \* NBR 1TERAT]ONS: 10.

.7.

:‡:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ELEMENT	PEAK FNERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 3	4230.	127345.	0. 0830 0. 5540 0. 0044	0.0016 0.0018 NOT DET	Ø. 3
1009: 215 1018: 379 1027: 352	). 553.	723. 109			5. 846.	627.
1117: 319 1126: 8060 1135: 101	1. 16884. S	388. 38 26347. 3098 92. 7			3. 710.	2738. 197. 75.
1301: 38 1310: 26 1319: 26	5. 26. 5. 24.	31. 3 36. 3	87. 32. 83. 28.	37. 4	Ø. 28.	
PK IT ENE	RGY ARE	EA BKGNE	) FWHM	CHAMMEL LEFT	PW CTS/	'SEC ZERR
1 1 511 2 1 564 3 1 603 4 1 646	l 26   12734 2 93   829	54. 3817 45. 4230 99. 923	9. <u>1.96</u> 2. <u>1.97</u>	1022.66 1012 1128.84 1128 1206.13 1195 1292.46 1285	)	2E 02 0.3 3E 01 1.2

91119065 QY RF

LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S626G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9395.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 9JAN80 2325:58 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KV

ELEMENT	PEAK ENERGY	BKGMI	<u> </u>	HKEA 	CONCE	VTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY		305) 442;	5. 121	4689. 3222.	0. 079 0. 71	12	0. 0019 0. 0024	2. 4 0. 3
%-ARSENIC	657. 4	370	9.	Ø. <	. e. eet	56	MOT DET	ECTABLE
1009: 154.	1.86.	1.76.	153.	178.	164.	1.83.	208.	257.
1018: 293.	41.5.	595.	826.	948.	946.	806.		461.
1027: 306.	208.	196.	145.	165.	1.46.	155.	180.	159.
1117: 271.	335.	372.	380.	392.	379.	541	998.	2584.
1126: 7348.	16065. ;	25131. ;	29195.	23868.	12211.	3645.		131.
1135: 86.	85.	60.	69.	67.	66.	54.		57.
<sup>1</sup> 1301: 22.	35.	31.	27.	29.	35.	24.	21.	20.
1310: 23.	33.	31.	35.	37.	45.	30.		17.
1319: 18.	25.	24.	30.	21	28.	25.	29.	29.
·	PULSE-PILI	E-UP CO	RRECTE	DATA.	CORREC:	riow =	1.000	
PK IT ENER	RGY ARI	EA BI	KGMD	FWHM	CHFINNEL	LEFT F	W CTS/	SEC ZERR
1 1 511.	Ø6 46:	89.	3050.	2. 77	1022. 52	1013	19 7.815	E 00 2.2
2 1. 564. 3 1 602.	26 1202;	22.	4425.	1. 95	1128.84	1.120	20 2.004	
3 1 602.	91 43:	80.	736.	1. 97	1206.08		19 7.301	
4 1 646.	<b>9</b> 3 31	02.	357.	2. 07	1292. 26	1287	14 5.030	

\*\*\*\*\* 10 3 1980 1:24:51 PM \*\*\*\*\*\*\*\*\* \*\*\*\* 

91119065 QY RF

8JAN80 1048:00

SAMPLE DATE: SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7786.000 UNITS: ШG

L.E.AD

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TAB1

ACQUISITION DATE: 9JAN80 2336:29 \* FWHM(1332) 2.390PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 1.0.

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

•	ELEMEM"	T 	PEAK ENÉRGY	BKG!	ND	AREA	COMCEN		1 SIGMA ERROR	%ERROF	ę,
•	%-COPPER %-ANTIMONY %-ARSENIC		511. 1 564. 3 657. 4	2205. 4141. 648. 98848. 325. 0. <		0. 085 0. 709 0. 006	9	0. 0020 0. 0025 NOT DET	2. 4 0. 4 ECTABLE		
•	1009: 1018: 1027:	146. 242. 251.	142. 335. 166.	144. 514. 158.	135. 659. 114.	126. 747. 115.	139. 757. 143.	140. 759. 133.	164. 554. 1.32.	183. 352. 105.	
•	1117: 1126: 1135:	250. 6041. 79.	268. 12887. 56.	363. 20540. 65.	363. 23681. 49.	337. 19618. 55.	353. 10039. 56.	440. 2950. 56.	810. 521. 31.	2149. 128. 50.	
•	1301: 1310: 1319:	20. 19. 16. P	22. 34. 17. ULSE-P11	18. 24. 16. LE-UP CO	20. 19. 16. ORRECTE	18. 35. 19. D DATA.	23. 36. 23. CORRECT	21. 25. 19. 10N =	18. 34. 25. 1. 000	24. 26. 26.	

•	PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL LEFT	ΡШ	CTS/SEC	ZERR
	1	1.	511. 14	41.41.	2205.	2. 90	1022.70 1013	18	6. 902E 00	2. 2
_	2	2	564. 26	98848.	648.	1. 96	1128.85 1113	26	1. 647E 02	Ø. 3
	3	2	579. 26	1.445.	-8.	2. 39	1158.83 1113	26	2. 409E 00	2. 6
	4	1.	602. 89	3533.	472.	1. 94	1206.05 1199	16	5.889E 00	1. 9
_	5	:1.	645. 98	258.	754.	2. 09	1292 16 1283	29	4 R05F-01	16 3

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00 SAMPLE IDENTIFICATION: S626I

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9322.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TABS

 **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*** 

+:

ACQUISITION DATE: 9JAN80 2346:55 \* FWHM(1332) 2.390 PRESET TIME (LIVE): \* SEMSITIVITY: 5.000 600. SEC ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

:4:

ELEMENT	PEAK ENERGY	BKGND	ARE	H	CONCEN	<del></del>	L SIGMA ERROR	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	511. 1 564. 3 657. 4	3361. 4217. 389.	482 1,2005		0. 083 0. 721 0. 005	5	0. 0020 0. 0024 NOT DETE	2. 4 0. 3 ECTABLE
1009: 176 1018: 351 1027: 323	446.	61.0.	760.	179. 875. 177.	171. 970. 151.	194. 792. 1.32.	207. 635. 151.	203. 456. 138.
1117: 284 1126: 7358 1135: 76	. 16168. :	392. 25186. 29 67.		404. 639. : 69.	449. 12099. 71.	548. 3651. 56.	982. 709. 58.	2688. 144. 58.
1301: 22 1310: 23 1319: 21	1.9.	35. 29.	29. 28. 33. ECTED D	29. 34. 25. ATA. (	28. 28. 26. CORRECT	24. 39. 18. 10N =		26. 40. 21.
PK IT EME	ERGY AR	EA BKC	iND FV	IHM CI	HANNEL	LEFT P	W CTS/:	SEC XERR
2 1 564 3 1 603	l. 25 1.200	59. 43 60. 9	217. 1. 937. 1.	94 1: 95 1:	128. 83 206. 15	11.20 11.96	22 8.0491 18 2.001 23 7.434 14 5.233	E 02 0.3 E 00 1.8

0

Laber 911190655QY

<u>(</u>

5th Irradiation 12/20/79

1.1.45

91119965 0	Y RF FIFTH IRE	RAD16	TION		AND PRINCES
SAMPLE,	SAM. WT		%-COPPER	X-FIMONY	X-ARSENIC
0222A 0222B 0222C 0222B 0222B 0222B 0222B 0222B 0222B 0222C 0222C 0222C 0222N 0222N 0222N 0222P 0222P 0222C	10256.000 12375.000 10287.000 10287.000 8484.000 8903.000 10368.000 8515.000 8515.000 8711.000 9779.000 9124.000 8321.000 8321.000 8163.000	<	0.01153- 0.01004- 0.01265- 0.01272- 0.01655- 0.01259- 0.01138- 0.00554- 0.01585- 0.01585- 0.01188- 0.01276- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558- 0.01558-	0. 80828 0. 81384 0. 80860 1. 08848 1. 23398 0. 84437 0. 78211 5. 42477 1. 07299 1. 13178 2. 38258 0. 83578 0. 84183 1. 95002 0. 83680 1. 03555 1. 22264 0. 79332 0. 72589	0. 18802 0. 19609 0. 19732 0. 26243 0. 30204 0. 19014 0. 19068 1. 26722 0. 26000 0. 27536 0. 58194 0. 19639 0. 19573 0. 19306 0. 48051 0. 19374 0. 24062 0. 29376 0. 19112 0. 17270
0222T	0002. 000		0.01354 AVG 0.002962 SD 21.880741 %RSD	1. 27211 AVG 1. 062786 SD 83. 544899 %RSD	0.30344 AVG 0.249719 SD 82.295235 XRSD
0223A 0223B 0223D 0223D 0223B 0223F 0223H 0223H 0223K 0223K 0223M 0223M 0223M 0223M 0223M 0223M 0223M	9945. 000 6360. 000 6922. 000 7372. 000 6348. 000 7145. 000 5566. 000 7719. 000 6110. 000 5883. 000 6120. 000 6611. 000 6722. 000 6722. 000 6434. 000 5488. 000 6464. 000	<	0.00991- 0.01235- 0.01038- 0.01488- 0.01488- 0.01132- 0.01491- 0.01301- 0.01304- 0.01304- 0.01493- 0.01493- 0.01437- 0.01332- 0.01332- 0.01330- 0.01351- 0.01351- 0.01323 AVG 0.01323 AVG 0.01323 AVG 0.01323 AVG	1. 08896 0. 81869 0. 80765 1. 37435 5. 60154 0. 79060 0. 79291 0. 72912 0. 82492 0. 78235 0. 76994 0. 79116 2. 14784 0. 75446 0. 94976 0. 81533 0. 83345 0. 86479 0. 85107 1. 41591 RVG 1. 522599 SD 107. 535027 %RSD	0. 26040 0. 19865 0. 19720 1. 32781 1. 35076 0. 18404 0. 19375 0. 16375 0. 19213 0. 18645 1. 44188 0. 18769 0. 19174 0. 52931 0. 18250 0. 23633 0. 19362 0. 23633 0. 19726 0. 21768 0. 19400 0. 34085 AVG 0. 370096 SD 108. 581070 %RSD
0224A 0224B 0224C 0224D 0224E 0224F 0224G 0224H 0224H	4863. 000 8218. 000 8397. 000 7322. 000 7770. 000 8343. 000 7065. 000 8409. 000 8286. 000	<	0.00890 0.01254 0.01656 0.01532 0.01276 0.01078 0.01190 0.01356 0.01297	5.30724 0.94577 1.98304 0.80568 0.75722 0.97507 0.82359 0.92981 0.78326 0.27998	1.35133 0.24043 0.49172 0.17797 0.18878 0.22804 0.19006 0.23004 0.19105

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0223D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7372.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THEEL

\*\*

ACQUISITION DATE: 21DEC79 713:50 \* FWHM(1332)2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 635. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: *600.* SEC \* MBR ITERATIONS: 10.

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4

DETECTOR: GFLI-8 \* LIBRARY: NUCL. L1B1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

•	ELEMEN	VT		EMER 		KGND	AREF	i c	DNCEN	TE:		IGMA ROR	ZER	ROR
	Z-COPY Z-ANT: Z-ARSE	M	ONY	511 564 657	. 1	5171. 2714. 1773.	159: 19239: 685:	L. :	3. 01.4 1. 374 3. 327	3	Ø.	0010 0051 0112	•	7. 1. 0. 4 3. 4
	1009 1018 1027	:	372. 409. 414.	37 44 36	6. 46	i <b>1</b> . 5:	54. 5	565.	390. 573. 322.	379 575 327		340. 478. 357.	397. 467. 335.	
•	•	: 1	0322. 8107. 279.	1295 2928 24	3720	13. 374:	25. 30 <sup>,</sup>	117. 18 <sub>°</sub>	533. 473. 207.	2030 7663 218	. 2	:064. ( :162. 21.7.	3051. 512. 202.	
•	1301 1310 1319	:	1.05. 220. 150. P	40 9	)9.	35. <b>11</b> : 38.	94. 1 <sup>,</sup> 77.	96.	87. 427. 105. RRECT	1.09 1.105 99 ION =		115. 671. 96. 000	115. 345. 96.	
4	PK I	T 1	ENER 511.	GY	AREA	BKGN	р ЕМ	ни сна		L.EF.T	РЫ	CTS/SI		%ERR 6. 9

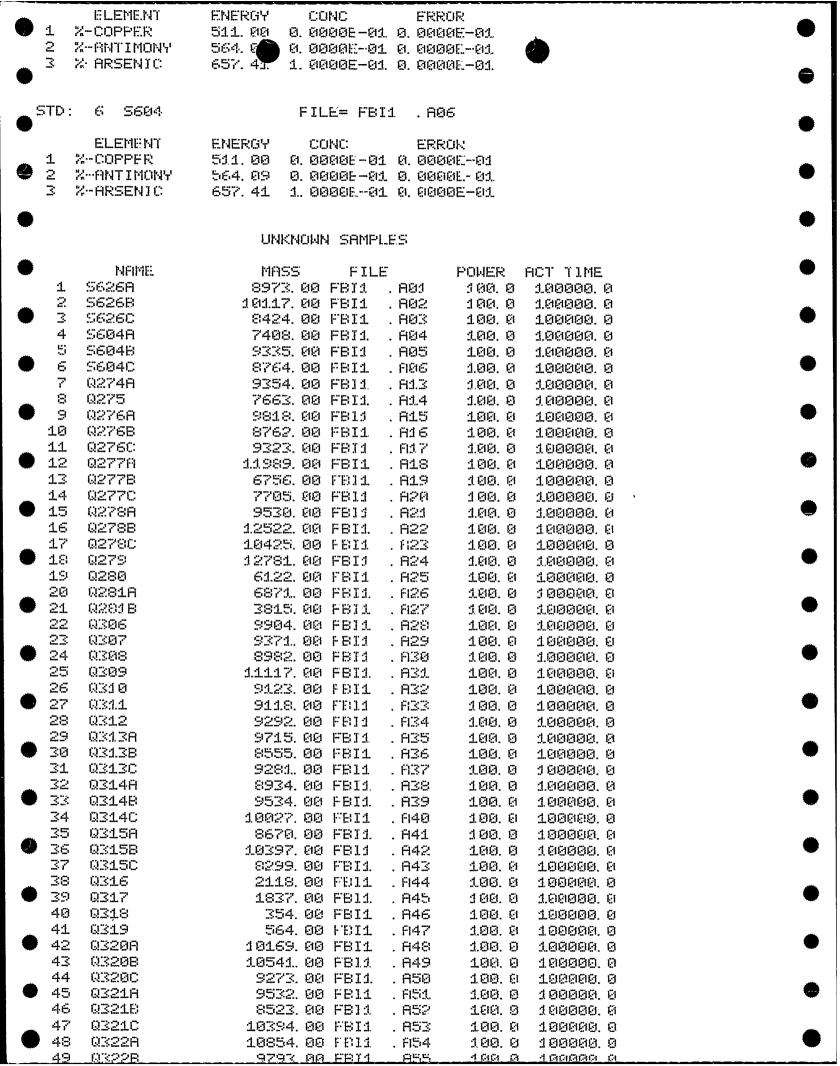
	1 1%		h1 11 L1 % C 1	HALI	DIVIDIALS	гипп	CHUMAIAEE	L.E.F I	L M	UIDYDEU	AERK
	1	1	511 20	1591.	5171.	3. 18	1022.82	1016	1.5	2. 651E 00	6. 9
	2	2	559. 14	66952.	3355.	2. 34	1118.61	1108	33	1.116E 02	0.4
	3	2	564. 10	192391.	2714.	2. 35	1128. 53	11.08	33	3. 207E. 02	0. 2
•	4	:1.	602. 76	5632.	4387.	2. 37	1205. 79	1194	31	9. 386E. 00	2. 1
	5	1.	645. 92	367.	2050.	2. 23	1292, 04	1286	20	6. 113E-01	18. 2
_			657. 10	6859.	1773.	2. 33	1.31.4. 38	1306	1.8	1.143E 01	1. 5
	7	1	665. 56	423.	1110.	2. 20	1331. 29	1326	12	7. 051.E-01.	12. 2

91119065 QY	RF FIFTH IRRAD	) IATION		5 m Irra dia tion
SAMPLE	SAM. WT. 🦫	%-COPPER	XFIN ONY	%-ARSENIC Pay-1 II
● 5626A 5626B 5626C •	8973. 000 10117. 000 8424. 000	0. 07933 0. 07604 0. 07896	0. 72292 0. 72618 0. 70984	0. 00471 0. 00389 0. 00600
are D	•	0.07811 AVG 0.001804 SD 2.309270 %RSD	0.71.965 AVG 0.008648 SD 1.201693 %RSD	0.00487 AVG 0.001065 SD 21.868130 %RSD
● S604A S604B S604C	7408. 000 9335. 000 8764. 000	0. 00712 0. 00722 0. 00697	1. 76136 1. 82154 1. 74553	0. 09837 0. 10351 0. 09794
•		0.00710 AVG 0.0001.29 SD 1.812309 %RSD	1.77615 AVG 0.040103 SD 2.257892 %RSD	0.09994 AVG 0.003100 SD 3.102238 %RSD 🗨
● Q274A	9354. 000	0. <b>01</b> 286	8. 7756 <del>6</del>	0. 14656
Q275 •	7663. 000	Ø. ØØ299	0. 79061	Ø. 15592
02768 02768 ●02760	9818. 000 8762. 000 9323, 000	0. 02101 0. 02223 0. 02260	2. 01.481 2. 04225 2. 03149	0. 01828 0. 01875 0. 01394
•		0.02194 AVG 0.000834 SD 3.8021.45 %RSD	2. 02952 AVG 0. 01.3822 SD 0. 681047 XRSD	0.01699 AVG 0.002648 SD 15.585615 %RSD
0277A 0277B ●0277C	11989. 000 6756. 000 7705. 000	0. 03105 0. 03183 0. 02921	0.00160 ( 0.00165 ( 0.00180 (	0. 00088 0. 001.99 0. 001.67
•		0.03070 AVG 0.001343 SD 4.374203 %RSD	0.00168 AVG 0.000103 SD 6.138560 XRSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
Q278A Q278B ●Q278C	9530. 000 12522. 000 1.0425. 000	0. 00208 0. 00246 0. 00224	0.03177	
•		0.00226 AVG 0.000191.SD 8.467975 %RSD	0.03133 AVG 0.000839 SD 2.679137 XRSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
Q279	1.2781. 000	0.03173	9. 99135 C	0. 00098
<b>●</b> Q280	6122. 000	0. 031.65	0.00169 <	0. 00212 <b>•</b>
0281A • 0281B	6871. 000 3815. 000	0. 03028 0. 05249	0. 67452 0. 74784	0. 01001 0. 00464 •
•		0.04139 AVG 0.015708 SD 37.954273 %RSD	0.71118 AVG 0.051839 SD 7.289213 %RSD	0.01001 AVG 0.000000 SD 0.000000 %RSD
<u>0306</u>	9904.000	0.00396	<u>0.76758</u>	й 16154

•0307 -	9371.000	0.00319	ø. 75372	Ø. 14983
@308 •	8982. 000	0. 00381	9. 769 <b>6</b> 3	0. 1.6209 •
0309	11117. 000	0. 00500	0. 71.757	Ø. 1.4144
• 0310	9123.000	0. 00399	Ø. 749Ø8	0. 1.4336 <b>•</b>
Q311 <b>S</b>	9118.000 <	0.00119	Ø. 62483	Ø. 11242
0312	9292. 000	0. 00465	ø. 75629	9. <b>1</b> 6451
• 0313A 0313D 0313C	9715.000 8555.000 9281.000	0. 05274 0. 05677 0. 05657	0.83089	0. 00378 0. 00403 0. 00386
•		0.05536 RVG 0.002273 SD 4.105274 %RSD	0.84477 AVG 0.015781 SD 1.868031 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
● 0314A 0314B 0314C	8934. 000 9534. 000 10027. 000	0. 04487 0. 04370 0. 04630	0. 78188 0. 79837	0.01128 0.00376 0.00382
•		0.04496 AVG 0.001299 SD 2.890093 %RSD	0.79258 AVG 0.009276 SD 1.170354 %RSD	0.01128 AVG 0.000000 SD 0.000000 XRSD •
• 0315A 0315B 0315C	8670. 000 10397. 000 8299. 000	0. 03548 0. 03581 0. 03705	0. 721.40 0. 72643 0. 74092	0. 01189 0. 00789 0. 00824
•		0.03611 AVG 0.000830 SD 2.299055 %RSD	0.72959 AVG 0.010133 SD 1.388876 %RSD	0.00934 AVG 0.002217 SD 23.741421 %RSD
<b>0</b> 0316	2118. 000	0. 08374	0. 74377	ø. 02070
0317	1837. 000	0. 05423	0.71042 <	0. 01195
0318	354. 000	0. 10301	0. 74040	0. 04492
•0319	564. 000	0. 08465	<b>0</b> . 75329	Ø. Ø3268 •
0320A ●0320B 0320C	10169. 000 10541. 000 9273. 000	0.05410 0.05516 0.05267	0. 66280	0. 00322 0. 00335 0. 00341
•		0.05398 AVG 0.001252 SD 2.318804 %RSD	0.65333 AVG 0.033958 SD 5.197755 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
0321A • 0321B 0321C	9532. 000 8523. 000 10394. 000	0. 05698 0. 05487 0. 05700	0. 61.817 0. 62803 0. 61501	0. 00698 0. 00504 0. 00514
•		0.05628 AVG 0.001225 SD 2.176145 %RSD	0.62040 AVG 0.006792 SD 1.094805 XRSD	0.00572 AVG 0.001095 SD 19.140076 %RSD

0322A ●0322B 0322C	1.0854. 000 9793. 000 9368. 000	0. 05388 0. 05592 0. 05440	0. 61873 0. 64765 0. 60 (**)	0. 00823 0. 00629 0. 00356
•		0.05473 AVG 0.001061 SD 1.937700 XRSD	0.62509 AVG 0.0201.45 SD 3.222703 %RSD	0.00726 AVG 0.003944 SD 54.323101 %RSD
Q261A ●Q261B Q261C	9290. 000 9084. 000 9200. 000	0. 02986 0. 02773 0. 02613	2. 07209	0. 00700 0. 00712 0. 01012
•		0.02790 AVG 0.001870 SD 6.703309 %RSD	2.02703 AVG 0.107244 SD 5.290682 %RSD	0.01012 AVG 0.000000 SD 0.000000 %RSD
0347AR ● 0347AB 0347AC	951.7. 000 1.0602. 000 9162. 000	0. 05234 0. 04956 0. 05149	0.01889	0. 00159 0. 00149 0. 00172
•		0.05113 AVG 0.001424 SD 2.784124 %RSD	0.01909 AVG 0.000326 SD 1.705728 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
Q347BA ● Q347BB Q347BC	8951 000 8889. 000 8577. 000	0. 05097 0. 04910 0. 04874	0.01883	0. 00174 0. 00189 0. 00178
•		0.04960 AVG 0.001199 SD 2.416853 %RSD	0.01884 AVG 0.001353 SD 7.181580 %RSD	0.00000 AVG 0.000000 SD 0.000000 %RSD
029111 029112 ●029113 S626D S626E	8610.000 7862.000 11589.000 10350.000 9178.000 13041.000 11122.000 12805.000 7500.000	0. 05969 0. 06065 0. 05759 0. 05759 0. 05613 0. 06858 0. 06438 0. 077223	0. 44739	0. 00528 0. 00467 0. 00475 0. 00665
● 5626F 5604D 5604E	9037.000 9268.000 10383.000	0. 07784 0. 00479 0. 00419	й. 69679 <del>С</del> 1. 22080	0. 00424 0. 10491

(TI)TITLF: 91119065 OY RE FIFTH RRADIATION (LN)LIBRARY: (SA)SAMPLE TIME: 20DEC79 1021:00 (SE)STD ENERGY TOLERANCE: 2.00 CUEDUNK ENERGY TOLERANCE: (TF)THERMAL FLUX: 0.0000F-01 (EF)FPITHERMAL FLUX: 0.0000E-01 (FF)FAST FLUX: 0.0000E-01 (QU)UNITS: UG ELEMENT ENERGY HALF-LIFE SEC 1 X-COPPER 511.00 1.2800E 01 H 4.6080F 04 Y-ANTIMONY 564.09 2.7200E 00 D 2.3501E 05 X-ARSENIC 657. 41 2.6300E 01 H 9.4680E 04 STANDARD SAMPLES NFIME MFISIS: FILE POWER ACT TIME 1 S626A 100.0 100000.0 8973.00 FBI1 . A01 S626B 10117.00 FBI1 . A02 100.0 1.00000.0 S626C 8424.00 FR11. . FI03 100.0 100000.0 4 7408.00 FBI1 . A04 S604A 100.0 100000.0 5 S604B 9335.00 FB11 . A05 100.0 100000.0 - 5694 8764.00 FB11 . A06 100.0 100000.0 1 S626A STD: FILE= FB11 . A01 ELEMENT ENERGY CONC ERROR X-COPPER 511.00 7.8000E-02 0.0000L-01 X-ANTIMONY 564.09 7.2000E-01 0.0000E-01 X- ARSENIC 657, 41 0.0000E-01 0.0000E-01 STD: 2 56268 FILE= FBI4 . 602 ELEMENT ENERGY CONC ERROR X--COPPER 511.00 7.8000E-02 0.0000E-01. X-ANT I MONY 564.09 7.2000E-01 0.0000E-01 X-ARSENIC 657. 41. 0.0000E-01.0.0000E-01. STD: 3 56260 FILE= FBI1 . A03 ELEMENT FNERGY CONC ERROR X- COPPER 511.00 7.8000E-02 0.0000E-01 Z-FINTIMONY 564.09 7.2000E-01 0.0000E-01 X-ARSENIC 657, 41, 0.0000E-01 0.0000E-01. STD: 4 S604A F1LE= F811 . A04 ILLEMENT. EME: RGY C:ONC: ERROR %-COPPER 51.1. 00 0.0000E-01 0.0000E-01 564. 09 X--AMT1MONY 0.0000E-01 0.0000E-01 X-ARSENIC 657. 41. 1.0000E-01 0.0000E-01



			7 11		and another the short of the second	 
50	Q322C	9368.00 FB11	. A56	100. 0	1.00000. 0	
<b>9</b> 51	0261A	9229.00 FBI1	. A57	1.00. Ø	100000.0	
52	Q261B	S <b>23</b> 4.00 FR11	. A58	100.0	<b>1</b> 10000.9	
53	Q261C	9≥d0.00 FBI1.	. A59	100.0	100000.0	
<b>5</b> 4	Q347AN	951.7. 00 FBI1	. A60	100. 0	199999. 9	•
55	0.347AB	10602.00 FBJ1	. f161	100.0	100000.0	
_ 56	Q347AC	9162.00 FB11	. FI62	1.00. 0	100000.0	
<b>5</b> 7	Q:347BA	8951. 00 FB11	. A63	100.0	1.00000.0	
58	Q347BB	8889. 00 FBI1	. A64	100.0	100000.0	
59	Q347BC	8577.00 FBI1	. £65	1.00. 0	100000.0	
<b>9</b> 60	0222A	10256.00 FB11	. A66	1.00. 0 1.00. 0	1.00000. 0	
61	0222B	12375.00 FBI1	. 867	100. 0	100000.0	_
_ 62	0222C	10287.00 FB11				
● 63	0555D	8484.00 FB11.	. A68	100.0	100000.0	
64	0255E	7246.00 FB11	. AG9	1.00.0	100000.0	
65	0222F		. A70	1.00. 0	10000.0	
<ul><li>65</li></ul>	wezzr 0222G	8903.00 FBI1	. A71.	100.0	100000.0	
<b>6</b> 7		10368.00 FB11	. 872	1.00. 0	100000.0	
	0222H	8009.00 FB11	. A73	1.00. 0	100000.0	
<b>6</b> 8	02221	8515.00 FBI1.	. A74	100.0	100000.0	
<b>9</b> 69	0222J	5933.00 FBI1	. fi?5	1.00. 0	100000.0	•
70 	0222K	7218.00 FRI1	. A76	100. 0	100000.0	
71	0555T	8711.00 FB]1	. A77	100.0	1.00000.0	_
72	Q222M	9700.00 FB11.	. A78	100. 0	100000.0	•
73	Q222N	9779.00 FBI1.	. A79	100.0	100000.0	
74	02220	9124.00 FBl1	. A80	1.99. 8	1.00000.0	_
75	Q222P	8006.00 FBI1	. A81	100. 0	1.00000.0	•
76	02220	8321. 00 FBI1	. A82	1.00. 0	100000.0	
_ 77	Q222R	8045.00 FBI1	. R83	100.0	1.00000.0	
<b>7</b> 8	02225	81.63. 00 FB11	. A84	100.0	1.00000.0	<b>9</b>
79	Q222T	8652.00 FEI1	. A85	100. e	100000.0	
_ 80	Q223A	9945.00 FR11	. FIB6	100.0	100000.0	
<b>9</b> 81	Q223B	6360.00 FBI1.	. A87	100.0	1.00000.0	
82	0223C	6922.00 FBI1.	. A88	100. 0	100000.0	
83	0223D	7372.00 FBI1	. FI89	100.0	100000.0	
84	0553E	6348.00 FB11	. AI90	100. 0 100. 0	100000.0	
85	0223F	7145.00 FB11	. A91.	100. 0	19888. 0	•
_ 86	0223G	5566.00 FBI1	. A92	100. 0	100000. 8	
9 87	0223H	7719.00 FE11	. 1192. . 1193	100. 8	100000.0	
88	0223I	6110.00 FB11				_
89	0223J		. A94	100.0	1.00000.0	
90	0253K	7710.00 FBI1	. A95	100.0	100000.0	-
91		5883.00 FB11	. A96	100.0	100000.0	
	0223L	6120.00 FBJ1.	. A97	1.00.0	100000.0	
92	0223M	5611.00 FBI1.	. A98	100.0	100000.0	_
93	0223N	6722.00 FBI1	. f:99	100.0	100000.0	
94	02230	6078.00 FB11	. FIJ.00	100.0	100000.0	
95	0223P	8155.00 FB11	. A101	100.0	100000.0	_
96	02230 02230	5228.00 FBI1	. A102	100. 0	100000.0	-
97	Q223R	6434.00 FB11	. A1.03	100.0	100000.0	
98	02235	5488.00 FBl1	. A184	100.0	1.00000.0	_
99	0223T	6464.00 FBI1	. A1.05	100.0	1.00000.0	
100	Q2:24A	4863.00 FBI1.	. A106	100. O	100000.0	*
101	Q224B	8218. 00 FBI1	. A1.07	1.00. 0	100000.0	
<b>9</b> 102	0224C	8397.00 FB11	. A108	1.00. 0	100000.0	
103	Q2:24D	7322.00 FBI1	. A1.09	109. 0	100000.0	
_ 194	Q224E	7770.00 FB14.	. A110	100.0	100000.0	
<b>1</b> 05	0224F	8343.00 FB11	. FI1.1.1	100. 0	1.000000.0	
106	0224G	7065.00 FB11	. A112	199. 9	100000.0	
_ 107	Q224H	8409.00 FBI1	. A113	199. 9	100000.0	
<b>1</b> 08	02241	6837.00 FBI1	. F:1.14	100. 0	100099.0	
109	Q224J	8286.00 FBI1.	. A115	100.0	100000.0	
_ 110	Q224K	8086.00 FBI1.	. H116	100. 0	100000.0	
• 111	Q224L	7003. 00 FBI1	. A117	100. 0	100000.0	
112	Q224M	6525.00 FB11	. FI1.1.8	100.0	100000.0	
_ 113	0224N	7827.00 FB11	. Hd.19	100.0	100000.0	
114	02240	6910.00 FBI1	. A120	100. 0	100000.0	
115	0224P	6541.00 FRI1	. 6120 8121	100.0 100.0	100000 0	
البيرة سأس ساس	Notice T1			TEIFI FI	i PipiriFiFI Ff	 

•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	120 121 122 123 124 125	116 117 118 119
															5626E S626F S626G S604E S604F S604G	02240 0224R 0224S 0224T
															11377.00 FB11 9345.00 FB11 11253.00 FB11 10231.00 FB11 7303.00 FB11 6894.00 FB11	6272.00 F811 6018.00 F8I1 7 4.00 F8I1 5540.00 F8I1
															. A07 . A08 . A09 . A10 . A11 . A12	. A122 . A123 . A124 . A125
															100.0 100.0 100.0 100.0 100.0 100.0	100. 0 100. 0 100. 0 100. 0
															100000.0 100000.0 100000.0 100000.0 100000.0	100000.0 100000.0 100000.0 100000.0
•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•

21 DEC 1979 2:44:19 FM \*\*\*\*\* 91119065 QY RF FIFTH IRRADIATION SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S626A TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8973. 999 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 20DEC79 1641:52 \* FWHM(1KK2) 2 799 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 19. DETECTOR: GELI-8 \* LIBRARY: NUCL. L.181. DATE CALIBRATED: 2600779 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% EMERGY WINDOW 499, 787, 10 674. 920 PK IT ENERGY AREA BKGND FWHM CHEINNEL LEFT FW CTS/SEC XERR FIT 1 1 511.01 22607. 6776. 3.15 1022, 43 1011 32 3.768E 01 0.8 2.06E 00 2 1 564.14 150379. 5859. 2.34 1128.60 1120 18 2.506E 02 0.3 2.04E 02 3 1 602.78 3903. 1681. 2, 28 1205.83 1194 25 6.506E 00 2.23.32E 1. 645, 65 220. 666. 2.16 1291.51 1285 13 3.662E-01 17.9 1.11E 00 657, 57 1. 167. 380. 1. 92 1315.32 1311 10 2.781E-01 18.2 7.74E-01

PEAK SEARCH COMPLETED

#### STANDARD REPORT:

• ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
				(1 SIGMR)		(1 SIGMA)
%-COPPER	511. 0	22607.	7.8000E-02	0.0000E01	7. 6267E-02	6. 41.51E-04
₩ %-ANTIMONY	564. 1.	150379.	7. 2000E01	0.0000E-01	4. 1536E-02	1. 1121E-04
%-ARSENIC	657. 4	Ø.	0. 0000E-01	9. 9000E-01	0. 0000E01	0. 0000E-01

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC: 1979 2:45:30 PM \*\*\*\*\* \*\*\*\*\* 91119065 QY RF FIFTH IRRADIATION SAMPLE DATE: 20DFC79 1021:00 SAMPLE IDENTIFICATION: 56268 TYPE OF SAMPLE: STANDFIRD SAMPLE QUANTITY: 101.17.00 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: FFF. TAB1 ACQUISITION DATE: 20DEC79 1652:26 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 624. SEC \* SHRIPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. DETECTOR: GLLI-8 \* LIBRARY: NUCL LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2. ØØØKV KEY/CHNL: 0.5003803 \* HELF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% ENERGY WINDOW 499. 787 10 674. 920 PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC ZERR FIT 1 3 511.03 241.98 7376. 3.08 1022.47 1011 32 4.033E 01 0.8 4.96E 00 9 2 559. 72 2433. 1.30 1097. 1.119. 78 111.1. 27 4.055E 00 2.8 1.47E 3 9 564, 13 169998. 1430. 2.33 1128.58 1111 27 2 833E 02 0.2 1. 602.77 2.31 4436. 1355. 1205.81 1195 20 7.393E 00 1.. 9 1. 08E 00 5 1 645, 96 262. 900. 2.12 1292.12 1284 15 4.370E-01.17.3 5.07E-01 1 13 2.577E-01 25.2 1.64E 657.31 155. 683. 2.38 1314.81 1309 PEAK SEARCH COMPLETED

#### STANDARD REPORT:

	ELEMENT	ENERGY	AREA	CONCENTR.	FRROK	CONSTANT	ERROR
_					(1 SIGMA)		(1 SIGMA)
U	%-COPPER	511 0	241.98.	7.8000E-02	0. 0000E-01.	7. 3099E-02	5. 9619E-04
	%-ANTIMONY	564. j	169998.	7. 2000E-01	0.0000E-01.	4. 1724E-02	1. 0204E-04
_	%-ARSENIC	657. 4	Θ.	0.0000F-01	0. 0000E-01.	0. 0000E-01.	0. 0000E-01

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 2:46:37 PM \*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* 91119065 QY RF F1F1H JRRADIATION SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 56260 TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 8424, 000 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TADI \*\*\*\*\*\*\*\*\*\*\*\* ACQUISITION DATE: 20DEC79 1703:04 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15 0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10. :4: DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCF: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEW \* ABUNDANCE LIMIT: 85.00% ENERGY WINDOW 499.787 TO 674.920 PK IT ENERGY HREH BKGND **FWHM** CHANNEL LEFT PW CTS/SEC MERR FIT 511.01 1 1 20723. 5326. 3.13 1022, 42 1011 27 3.454F 01 0.9 2.52E 00 2  $\odot$ 559.76 1.29 1.849. 895. 1119.86 111.2 26 3.081E 00 3.3 1.16E 02 3 9 564.14 138105. 1146. 2.33 1128.61 1.112 26 2.302E 02 Ø. 3 4 1 602, 80 3643. 1068. 2.42 1205.86 11.96 19 6.072E 00 2.1 2.59E 00 격격4. 657, 99 198. 2.26 1314.18 1310 12 3.296E-01 16.7 1.39E 00 PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT.	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
				(1 SIGMA)		(1 SIGMA)
_ %-COPPER	511 0	20723.	7. 8000£02	0. 0000E-01	7.5905E-02	6. 4880E-04
●%-ANTIMOMY	564. 1	1.381.05.	7. 2000E-01	0.0000E01	4. 0785E-02	1. 1065E-04
%-ARSENIC	657.4	<b>일</b> .	0. 0000E-01.	0. 0000E01	0. 0000E-01	0. 0000E-01

\*\*\*\*\* 21 DEC 1979 2:47:47 PM \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\* **\*** 91119065 QY RF FIFTH IRRADIATION SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 5604A TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 7408, 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. TAB1 ACQUISITION DATE: 20DEC79 1713:38 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SEMSITIVITY: 600. SEC 5. 999 ELAPSED REAL TIME: 641. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERHIONS: 10. :4: DETECTOR: GLLI-8 \* LIBRARY: NUCL. L181 DATE CALIBRATED: 2600779 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHIAL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% ENERGY WINDOW 499. 787 TO 674, 920 PK IT ENERGY AREA BKGND FMHM CHANNEL LEFT PW C15/SEC **ZERR** FIT 1 1 511. 19 1.628. 6345. 3.34 1022. 79 1015 15 2.713E 00 7.4 2.37E 00 2 2 559.18 29050. 3565. 2.36 11.1.8. 70 1107 37 4.842E 01 0.7 1.08E 3 2 564.12 300785. 2982. 2.35 1128.58 11.07 37 5.013E 02 0.2 4 1 602.74 2.39 8044. 3111. 1205.76 1195 23 1. 341E 01 1.5 3.62E 00 5 1 645, 81 733. 8.7 2.04E QQ 1656. 2.92 1291.82 1283 18 1.222E 00 1. 657. 19 2836. 1687. 2, 38 1314, 56 1306 17 4. 727E 00 2.8 1.87E 1 665, 28 296. 1267. 3. 97 1.330. 73 1325 14 4.940E-01 17.9 1.57E 00

PEAK SEARCH COMPLETED

#### STANDARD REPORT:

 ELEMENT	ENERGY	AREA	CONCENTR.	ERROK	CONSTANT	ERROR
				(1 SIGMA)		(1 SIGMA)
%-COPPER	511.0	Ø.	0. 0000E-01	0. 0000E-01	0. 0000E-01.	0. 0000E-01.
 %-ANTIMONY	564. 1.	Θ.	0. 0000E-01.	0. 0000E-01	0. 0000E-01	0. 0000E-01
%-ARSENIC	657. 4	2836.	1.0000E-01	0. 0000E-01.	7.6667F-03	2.1303E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 2:48:55 PM \*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 91119065 QY RF FIFTH IRRADIATION SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S604B TYPE OF SAMPLE: STANDARD SAMPLE QUENTITY: 9335, 000 UNITS: UG SAMPLE GEOMETRY: .25 IN EFFICIENCY FILE NAME: EFF. THB1 ACQUISITION DATE: 20DEC79 1724:32 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 656. \* SHAPE PARAMETER : 15.0 % SEC ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 16. :4: DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSFT: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% ENERGY WINDOW 499, 787, 10 674.920 PK IT ENERGY AREA BKGND F WHM CHANNEL LEFT PW COSYSEC **ZERR** FIT 1 1. 511. 02 2060. 8291. 3.60 1022, 45 1014 15 3.433E 00 6.6 3.54E 00 2  $\Xi$ 559, 17 2.35 36518. 5274. 1118.68 11.08 32 6.086E 01 0.6 1.56E 02 3. 2 564.11 391213. 4738. 2.35 1128.56 1108 32 6.520E 02 0.2 1. 602.74 10348. 3914. 2.33 1205.75 1197 17 1. 725E 01 1.3 7.49E 00 5 1 646. 01 654. 2230. 2.66 1292, 21 1286 13 1.090E 00 10.9 6.54E-01 1 657, 12 3743. 2276. 2.43 1314.43 1307 16 6.238E 00 2. 4 8. 32E-N

PERK SEARCH COMPLETED

#### STANDARD REPORT:

ELEMENT	FNERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
_				(1 SIGMA)		(4. SIGMA)
● %-COPPER	511. 0	Ø.	0. 0000E-01	0.0000E-01	0. 0000E-01	0. 0000E-01.
X-ANTIMONY	564. 1.	Øi.	0. 0000E-01.	0. 0000E-01.	0. 0000E-01	0. 0000E-01
Z-ARSENIC	657. 4	3743.	1. 0000E-01	0. 0000E-01	8.0678E-03	1 9632E-04

\*\*\*\* 21 DEC 1979 2:50:02 PM \*\*\*\*\* \*\*\*\*\* **`**\* 91119065 QY RF FIFTH IRRADIATION SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANNITY: 8764, 000 UNITS: UG SAMPLE GEOMETRY: . 25 IN EFFICIENCY FILE NAME: EFF. TABI ACQUISITION DATE: 20DEC79 1735:43 \* FWHM(1332) 2.390PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5. 999 ELAPSED REAL TIME: 649. SEC \* SHOPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 19. DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB4. DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. aaakv KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDFINCE LIMIT: 85. 00% EMERGY WINDOW 499, 787, 10 674, 920 PK IT ENERGY AREA **EKGND** FWHM CHINNEL LEFT PW CTS/SEC XERR FIT 1 1 511.13 1.847. 7928. 3.05 1022.66 1016 16 3.078E 00 7. 2 1. 57E 00 2 2 559, 17 33574. 4311. 2.31 1118.67 1109 33 5.596E 01 0.6 1.47E 02 3 2 564.12 354.265. 4070. 2.35 11.28. 57 1109 33 5.854E 02 0.2 1 602.77 9403. 4152. 2.33 1205.81 1194 24 1. 567E 01 1.4 2.53E 00 5 1. 645, 81 692. 1.827. 2.30 1291.82 1286 13 1.003E 00 10.8 8.24E-01 1. 657. 09 3309. 1852. 2.42 1314.37 1308 14 5.51.4E 00 2. 5 2. 93E 665, 64 1 1223. 2, 28 265. 1331.45 1327 10 4.422E-01 19.6 1.16E 00

PERK SEARCH COMPLETED

STANDARD REPORT:

_	ELEMENT	ENERGY	AREA	CONCENTR.	ERROR	CONSTANT	ERROR
*- %-					(1 SIGMA)		(1 SlGMA)
	%-COPPER	511. 0	₽.	0. 0000E-01	0.0000E-01	0. 0000F-01	0.0000E-01
_	%-ANTIMONY	564. J	₽.	0.0000E-01	0. 0000F-01	0.0000E-01	0. 0000E-01
•	%-ARSENIC	657. 4	3309.	1.0000E-01	0.0000E-01	7.6337E-03	1.9320E-04

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# SUMMARY OF STANDARD COASTANTS:

	1551					
ã.	ELEMENT	X-COPPER	AT	511.	ЙÜ	KEW

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
5626A 5626B	7.8000E-02 7.8000E-02	7. 6267F-02 7. K099F-02	(1 SIGMA) 6.4151E-04 5.9619E-04
2659C	7. 8000E-02	7. 5905E-02	5. 4880E-04
MEAN CONSTANT,	3 STD5:	7. 4984E-02	3. 6229E-04

## 2. ELEMENT %-ANTIMONY AT 564.09 KFV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A S626B S626C	7. 2000E-01 7. 2000E-01 7. 2000F-01	4. 1536E-02 4. 1724E-02 4. 0785E-02	1. 1121E-04 1. 0204E-04 1. 1065E-04
MEAN CONSTANT,	3 SYDS:	4. 1369E-02	6 2189F-05

## 3. FLEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR
S604A S604B S604	1.0000E-01 1.0000E-01 1.0000E-01	7. 6667F-03 8. 0678F-03 7. 6337F-93	(1. SIGMA) 2. 1303E-04 1. 9632E-04 1. 9320F-04
MEAN CONSTANT,	3 STDS:	7. 7940E-03	1. 1564E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 2:51:34 PM \*\*\*\*\* \*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S626A

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 8973.000

SAMPLE GEOMETRY: . 25 1N EFFICIENCY FILE NAME: EFF. THB4.

:4:

UNITS:

LIG

ACQUISITION DATE: 20DEC79 1641:52 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAFSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL I-8 \* Library: NUCL. Lib1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	ı cok	ICENTR.	1 SIGMA ERROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. <i>1</i> .	5859.	1,50379	). Ø.	7229	0. 0008 0. 0022 0. 0009	Ø. 3
• 1115: 296 1124: 1942 1133: 1556	2. 5679.	1.3467. 22		1052. 293	559. 541 331. 24653 94. 77		851. 6294. 70.
1115: 296 1124: 1942 1133: 1556	2. 5679.	13467. 22		)052. 293			851 6294. 70.
1319: 4	7. 38.	44. 43.	48. 37.	59. 47.	85. 69 56. 40	3. 40.	41.
PK IT EME	RGY ARE	A BKGI	ND FWH	IM CHANI	WEL LEFT F	°и стѕ∠ѕ	EC ZERR
<ul> <li>1 1 511.</li> <li>2 1 564.</li> <li>3 1 602.</li> <li>4 1 645.</li> <li>5 1 657.</li> </ul>	14 15037 78 390 65 22	9. 6t	59. 2.3 31. 2.2 56. 2.1	84 1128. 26 1205. 16 1291.	43 1011 60 1120 83 1194 51 1285 32 1311	32 3.768E 18 2.506F 25 6.506E 13 3.662E 10 2.781E	02 0.3 .00 2.2 -01 17.9

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 2:52:44 PM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S626B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10117.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. 7AB1

ACQUISITION DATE: 20DEC79 1652:26 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803

\* HALF LIFE RATIO: 8. 99 OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK ENERGY	BKGND	HF	KEA	CONCEN	****	S1GMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	, 511. 0 564. 1 657. 3	7376. 1430. 683.	1699	L98. 998. L55.	0. 076 0. 726 0. 003:	2	0. 0007 0. 0021 0. 0010	0. 9 0. 3 25. 3
• 1115: 31 1124: 228 113%: 182	2. 6497.	509. 15147. 3 1.65.	599. 25547. 1 <i>2</i> 7.	639. 32761. 147.	594. 33354. 115.	647. 27452. 106.	665. 1.6869. 112.	1005. 6673. 102.
1115: 31 1124: 228 1133: 182	2. 6497.	509. 15147. 3 165.	599. 25547. 127.	639. 32761. 147.	594. 33354. 115.	647. 27452. 106.	665. 1.6869. 1.12.	1005. 6673. 102.
• 1310: 5 1310: 5	7. 63. Ø. 59. 1. 44.	50. 54. 52.	53. 67. 62.	45. 63. 39.	57. 77. 42.	47. 88. 53.	50. 67. 44.	46. 52. 49.
	PULSEP1L	e-ur culth	RECO ED	DATA.	CORRECT	10M =	1. 000	

	PK	1.1	ENERGY	AREA	BKGND	FWHM	CHONNEL	LEFT	FЫ	CTS/SEC	ZERR
)	А.	1	51.1 03	24198.	7376.	3. 08	1022. 47	1.01.1	32	4.033E 01	0.8
	2	9	559. 72	2433.	1097.	1.30	1119. 78	1.111	27	4. 055E 00	2. 8
	3	9	564. 13	169998.	1430.	2. 33	1128. 58	1111	27	2.833E 02	0.2
	4	t:	602. 77	4436.	1355.	2. 31.	1205.81	1195	20	7.393E 00	1. 9
	5	1.	645. 96	262.	900.	2. 12	1292. 12	1284	15	4. 370E-01	17.3
_	6	1	657. KI	1.55.	683.	2. 38	1314, 81	1309	13	2. 577E-01	25. 2

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#### 91119065 QY KF FIFTH IRRADIATION

SAMPLE DATF: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S626C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8424, 999 UNITS: LlG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 20DEC79 1703:04 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

DETECTOR: GEL.I-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

657, 00

198.

ELEMENT.	PEAK FNERGY	BKGND	AREA	CONCER		STGMA RROR	ZERROR
2-COPPER ●%-ANTIMONY %-ARSENIC	564. 1	1146.	138105.	0. 709	:8 Ø.	0022	Ø. 3
• 1115: 271 1128: 1764 113%: 1455	. 51.13. :		475. 50 9937. 2613 104. 8				835. 5793. 97.
1115: 271 1124: 1764 113%: 1455	. 51.13.		475. 50 0937. 2613 104. 8	d. 27386.	496. 22505. 1 99.		835. 5793. 97.
● 131.0: 34 131.0: 48		40. 38.	66. 7 41. 4	'9. 78. 15. 49.	54. 42.	48. 49.	47.
PK IT ENER					LEFT FW		C ZERR
<ul> <li>1 1 511.</li> <li>2 9 559.</li> <li>3 9 564.</li> <li>4 1 602.</li> </ul>	76 184: 14 13810:	9. 89 5. 11.	35. 1.29 46. 2.33	1022. 42 1.119. 86 1128. 61 1205. 86	1112 26 1112 26	2. 302E	01 0.9 00 3.3 02 0.3 00 2.1

444.

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DFC79 1021:00 SAMPLE IDENTIFICATION: S604A

'SHMPLE IDENTIFICATION: S604A TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7408.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:4:

ACQUISITION DATE: 20DEC79 1713:38 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 641. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB4

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV | KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

1

:1.

657.19

665, 28

2836.

296.

		BKGMI	D F	AREA	CONCEN	TR.	ERROR	ZERRO	ĸ
Z-COPPER Z-ANTIMONY	511. 2 564. 1	634 <b>:</b> 298:		.628. 1785	0. 007 1. 761	'1 a	0. 0005 0. 0042	7. 0.	
%-ARSENIC	657. 2	168		2836.	0. 09E	• =	0. 0072 0. 0031	3.	
1115: 1464		4561	5743.			3594.		2009.	
1124: 4090 113%: 3303		2701.8. 429.	45248. 317.			48479. 292.	29638. 243.	1.2229. 23 <sub>1</sub> .	
, 1115: 1464	. 2844.	4561.	5743.	5956	5216.	3594.	2339.	2009.	
1124: 4090 1133: 3303		2701.8. 429.	45248. 317.	57623 313		48479. 292.	29638. 243.	12229. 231.	
1304: 96	. 101	107.	196.	95	. 100.	104.	98.	124.	
) 1310:     142 1319:     131		364. 97.	516. 100.				357. 98.	1.89. 94.	
ļ	WLSE-P1L	E-UP CO	RRECTE					,	
PK IT EMER	GY AR	EA B	KGND	FWHM	CHANNEL	LEFT P	√ CTSZ	SEC %E	ERR
1 1 511.			6345.		1022. 79		L5 2. 713		4
2 2 559.			3565.		1118. 70		37 4.842		•
3 2 564. 4 1 602.			2982. 3444		1.128. 58		87 5.013		
4 1. 602. 5 1. 645.			3111. 1656.		1205. 76 1291. 82		23 1.341 L8 1.222		

2.38

3.07

1687.

1267.

1314.56 1306

1330.73 1325

17 4. 727E. 00

14 4.940E-01 17.9

2.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 2:56:10 PM \*\*\*\*\*\* \*\*\*\*\*\*\* **\***\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S604B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9335, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. 1AB1

ACQUISITION DATE: 20DEC79 1724:32 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SFNSITIVITY: 5.000 ELAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.99 OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

UNKNOWN SAMPLE REPORT

%ERROR	. SIGMA ERROR	1 TR.	CONCEN	REA	AI	BKGNE	PEAK ENERGY		ELEMENT
6. 6 0. 2 2. 9	0. 0005 0. 0040 0. 0030	5	0. 007 1. 821 0. 103	360. 213. 743.	. 391:	8291 4738 2276	511. 0 564. 1 657. 1	ONY	%-COPPE %-ANTIM %-ARSEN
2763. 15804. 395.	2899. 38354. 462.	4692. 62540. 454.	6517. 75977. 445.	7654. 75261. 475.	7285. 59669. 555.	5946. 35532. 632.	3629. 1.5567. 1116.	191.8. 5433. 4379.	• 1115: 1124: 1133:
2763. 15804. 395.	2899. 38354. 462.	4692. 62540. 454.	651.7. 75977. 445.	7654. 75261. 475.	7285. 59669. 555.	5946. 35532. 632.	3629. 15567. 1116.	1918. 5433. 4379.	1115: 1124: 1133:
188. 293. 162.	157. 462. 151. 1. 000	138. 699. 139. TON =	167. 854. 162. CORRECT	181. 813. 133. DATA.	161. 736. 131. RECTED	173. 525. 148.	174. 306. 149. LSE-PIL	162. 218. 184.	• 130%: 1310: 1319:

PK IT ENERGY FIREA BKGND FWHM CHANNEL LEFT PW CTS/SEC **XERR** 1 1. 511.02 8291. 2060. 3, 69 1.022, 45 1.014 15 3.433E 00 6.6 2 2 559, 17 36518. 5274. 2.35 1118.68 1108 32 6.086E 01 9.6 3 2 564. 1.1 391.213. 2.35 4738. 1128.56 1108 32 6.520E 02 0.2 1 602.74 10348. 3914. 2.33 1205.75 1197 17 1.725E 01 1. 3 5 1 646.01 654. 2230. 2.66 1292.21 1286 13 1.090E 00 1.0. 9 1 657. 1.2 3743. 2276. 2.43 1314, 43 1307 16 6.238E 00 2.4

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1.979 2:57:14 PM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: S604C

TYPE OF SAMPLE: UNKMOWN SAMPLE QUANTITY: 8764.000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

ACQUISITION DATE: 20DEC79 1735:43 \* FWHM(1332) 2.399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 649. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

•	ELEMENT		PEAK ENERGY	BKGMI	) fi	REA	CONCEN		SIGMA ERROR	%ERROR
•	X-COPPE X-ANTIM X-ARSEN	IONY	511. 1 564. 1 657. 1	792) 407) 1.85;	a. 351:	847. 265. 309.	0. 007 1. 745 0. 097	5	0. 0005 0. 0040 0. 0029	7. 2 0. 2 2. 9
	1115:	1781.	3422.	5339.	6829.	7186.	5989.	4341.	2671	2379.
	1124:	4962.	13480.	32058.	53228.	67284.	6831.0.	56377.	34493.	1.4334.
	1133:	3879.	961.	502.	505.	410.	381.	380.	328.	361.
	1115:	1781.	3422.	5339.	6829.	7186.	5989.	4341.	2671.	2379.
	_ <b>112</b> 4:	4962.	1.3480.	32058.	53228.	67284.	68310.	56377.	34493.	14334.
	1133:	3879.	961.	502.	505.	410.	384.	380.	328.	361.
	1301:	163.	1.37.	120.	129.	144.	152.	144.	119.	132.
	1310:	174.	285.	467.	669.	756.	726.	619.	430.	249.
	<b>1</b> 319:	153.	112.	132.	134.	124.	1.29.	127.	115.	111.
_		FU	JLSE-PIL	E-UP CO	RRECTED	DATA.	CORRECT		1. 000	

	ΗK	11	ENE.KUY	HREH	BKGND	FWHM	CHANNEL.	LEFT	PΜ	CTS/SEC	%ERR
•		1	511. 13	1847.	7928.	3. 05	1922. 66			3.078E 00	
		2	559. 17	33574.	4311.	2. 31	1118. 67			5.596E 01	Ø. 6
		2		351265.	4070.	2. 35	1128. 57		33	5.854E 02	0.2
•	•			9403.	4152.	2. 33	1205.81	1.1.94	24	1. 567E 01	1.4
	5	1	645. 81	602.	1827.	2. 30	1.291. 82	1286	13	1.003E 00	10.8
		1.		3309.	1852.	2. 42	1.31.4. 37	1308	14	5. 514E 00	2.5
•	7	1.	665. 64	265.	1223.	2. 28	1331, 45	1327	10	4. 422E-01.	19.6

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0274A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9354.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

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ACQUISITION DATE: 20DEC79 1746:45 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

657.11

5259.

1543.

1.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONC		SIGMA ERROR	%ERROR
X-COPPER • X-ANTIMONY X-ARSENIC	511. 0 564. 1 657. 1	5405. 2086. 1543.	3603. 166280. 5259.	0.7	757	0. 0004 0. 0023 0. 0033	3. 4 Ø. 3 2. 3
• 1115: 2058 1124: 2393 113%: 1908	2. 6361.		1758. 31	467. 854 789. 3280 210. 18	12. 26836.	2942. 16627. 157.	1529. 6881. 168.
1115: 2058 1124: 2393 113%: 1908	2. 6361.		4758. <b>31</b>	467. 854 789. 3280 210. 18	12. 26836.	2942. 16627. 157.	1529. 6881. 168.
1301: 84 1310: 176 1319: 15	5. 274.	98. 603. 69. :-UP CORRI	87.	125. 112 72. 7	98. 101. 21. 868. 22. 85. CCTION =	98. 544. 104. 1. 000	135. 256. 101.
PK IT ENER	RGY ARE	A BKGI	VD FWH	M CHANNE	L LEFT PL	1 CTS/S	EC ZERR
<ul> <li>1 1 511.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 571.</li> </ul>	17 5057 13 16628	°6. 23; 80. 20:	20. 2.3 36. 2.3	1. 1118.6 4 1128.5	68 11.07 3 69 1107 3	.8 6.005E 34 8.429F 34 2.771E 13 3.938E	01 0.5 02 0.2
5 1 602.	78 459	19	71. 2.3	4 1205. E		8 7.504E	

2. 29

1314.42 1305

18 8.765E 00

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0275

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7663.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 20DEC79 1757:28 \* FWHM(1332) 2.390 PRESETT TIME (LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR TIERATIONS: 10.

:+

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

665, 44

4

210.

-	ELEMENT		PEAK ENERGY		D F	IREA	CONCE		. S1GMA ERROR	XERROR
•	X-COPPE X-ANTIM X-ARSEN	R ONY .	510. 9	307 1.56	5. 138	8583.	Ø. 790	36	0. 0025	12. 2 0. 3 2. 4
•	1115: 1126: 113%:	1.934.	5262.		8675. 20936. 133.	26381	. 27237.	22876.		5901.
•	1115: 1124: 113%:	1729. 1934. 1657.	3936. 5262. 346.	6736. 12088. 163.	8675. 20936. 133.	26381.		22876.	2461. 13922. 123.	1345. 5901. 129.
•	1301: 1316: 1319:	145. 107.	299. 70.	499. 53.	751. 65.	956 45	. 91.5.	815. 66.	83. 491. 59.	231.
	PK IT	ENERG			KGND		CHANNEL			SEC ZERR
•	1 1. 2 2 3 2 4 1	559. 1. 564. 1. 602. 7	4 1385 7 38	35. 83. 72.	1994. 1565. 2342.	2. 34 2. 33 2. 35	1022. 29 1118. 69 1128. 61 1205. 81	1.109 3 1.109 3	.2 1. 1311 2 7. 4731 2 2. 3101 29 6. 4531	E 01 0.5 E 02 0.3
	5 1	657. 1	6 45	62.	1400.	2. 39	1314 51	1307 1	8 7 603	- AA 19

2.00

1331.06 1325

13 3.507E-01 21.1

881.

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0276A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9818.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:}:

ACQUISITION DATE: 20DEC79 1808:06 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSFD REAL TIME: 658. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLFRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

1.

657.12

682.

2037.

ELEMENT	PEAK ENERGY	BKGND	FF	KEA	CONCER		SIGMA ERROR	ZERR	OR 
%-COPPER •%-ANTIMONY %-ARSENIC	511. 0 564. 1 657. 1	1.1052. 4618. 2037.	4516	357. 515. 582.	0. 021 2. 014 0. 018	.8 '1			. 8 . 2
• 1115: 1026 1124: 6373 113%: 5061	. 17848.	41.339. 6	2133. 9086. 670.	2257. 86440. 554	87718.	1927. 71733. 498.	1932. 43984. 460.	2787. 1.8022. 447.	
1115: 1026 1124: 6373 1133: 5061	. 17848.	41339. 6	2133. 9086. 670.		2200. 87718. 521.	1927. 71733. 498.	1932. 43984. 460.	2787. 18022. 447.	
1301: 173 1310: 149 1310: 146	). 174.	145. 196. 149. -UP CORR	149. 265. 128. ECTED	122. 263. 156. DRTA.	225. 153.		146. 198. 1.16. 1. 000	155. 179. 141.	
PK IT EMER	:GY ARE	A BKG	ND F	-инм с	HFINNEL	LEFT PW	CTSZ	SEC %	ERR
<ul> <li>1 1 511.</li> <li>2 3 559.</li> <li>3 3 564.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	35 984 11 45161 76 1176	.7. 53 .5. 46 .6. 45	63. : 18. : 60. :	2.57 1 2.35 1 2.37 1	1022. 45 L119. 04 L128. 55 1205. 79 L291. 96	1109 4 1109 4 1196 2		E 01. 1 E 02 0 E 01. 1	. 5 . 2 . 2

2. 66

1314.43 1308

14 1.137F 00 10.1

## 91119065 QY RF FIFTH 1RRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q276B

TYPE OF SAMPLE: UNKNOWN
SAMPLE QUANTITY: 8762.000

SAMFLE QUANTITY: 8762.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

\*

ACQUISITION DATE: 20DEC79 1819:17 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER: 15.0 %
PLAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.1B1

:4:

#### UNKNOWN SAMPLE REPORT

656, 89

621.

1808.

ELEMENT		PEAK ENERGY	PKGNI	D F	REA	CONCE	1. N R.	SIGMA ERROR	%ER	ROR
₩Z-ANTIM	ONY	564. 1.	405:	1. 407	7724.	0. 023 2. 043 0. 018	:2	0. 0045		2. 9 0. 2 0. 6
1115: 1124: 1133:	6373.		41339.	69086.	86440	. 2200. . 87718. . 521.	71733.	43984.	18022	2
1115: 1124: 1133:	1026. 6373. 5061.	1348. 17848. 1360.	41339.	69086.	86440	. 2200. . 87718. . 521.	71.733.	· 1932. 43984. 460.	1.8022	2.
• 1310: 1310:	1.49. 1.46.	1.39. 174. 1.47. L.SE-PIL	196. 149.	265. 128.	263 156	. 225.	1.27.	1.98. 116.	179	<b>9</b> .
PK IT	ENERG	Y AR	EA BI	KGND	FWHM	CHANNEL	LEFT PW	CTS/	SEC	%ERR
• 4 1.	511. 0 559. 3 564. 1 602. 7	2 88 2 4077 6 109	13.	5231. 4051. 3520.	2. 67 2. 35	1022. 41 1118. 98 1128. 57 1205. 79	1109 3 1109 3	0 9.439 5 1.469 5 6.795 0 1.832	E. 01 E. 02	2. 9 1. 6 0. 2 1. 2
5 1	645. 8	9 8	9 <b>0</b> . :	1939.	2. 63	1291. 98	1286 1	5 1.333	E 00	8. 7

2.50

1313.79 1307

15 1.035E 00 10.5

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0276C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9323.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: FFF. TABL

:4:

ACQUISITION DATE: 20DEC79 1830:23 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

رسر یه ومواونده می سود و مواونده سی

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+

#### UNKNOWN SAMPLE REPORT

1

657. 94

489.

2020.

ELEMENT	* 40000 48444 \$44 \$ 401. \$4400 \$	PEAK ENERG	r' B	KGND	A	REA	CON	CEM			IGMA ROR	ZER	ROR
%-coppe		511.		1.230.	6	Ø65.	Ø. 6	322i	6	ଡ.	9996		 2. 8
MITANTY MARSEN		564. 657.		4358. 2020.		1695. 489.		031: 013:			0044 0019		0. 2 3. 8
1115:	976.	127	9. 17	70.	1.989.	2129	. 20:	23.	1834	Ļ <u>.</u>	1877.	2562	
1124: 1138:	5980. 5058.			09. 6 09.	4932. 600.	82194 499		11. 56.	69373 444		251.1. 436.	17596 445	="
) 1115:	976.	1.27	9. 17	70.	1989.	2129			1834		1877.	2562	•
1129: 1133:	5980. 5058.	1653	6. 388	09. <u>6</u>	4932.	82194	. 841.	11.	69373	. 4	2511.	17596	•
					600.	499			444		436.	445	•
1301: 1310:	1.67. 1.39.			32. 88.	1.25. 244.	135 244		36. 33.			150. 1.89.	140 152	
1319:	123. Pl		2. 1 1L.E UP	48. Cope	131. Forer	133 DATH.		32. urt	145 10N =	i.	1.36. aaa	106	•
) PK IT	ENER											,mar game ,mar.	tz 2 0000 to 0, 000
r ri		•	AREA	BKG	NU	FWHM	CHHMM	LL.	LEFT F	*I4	CTSZ	5EU	ZERR
1 1	511.		6065.	11.2		3. 06	1022.				1. 011		2. 8
2 3 3 3	559. I		9522.	55		2. 63	1119.		1108		4. 587		1. 5
	564.		0695.	43		2. 35	1128.		1108		7. 178		0. 2
	602. °		1298.	32		2. 32	1205.		1198		1. 883		1. 2
5 1	645.	20	712.	1.9	92.	2. 56	1292.	សស	1286	13	1. 187	E 00	9. 6

2.16

1314.26 1308

14 8.154E-01 13.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:03:34 PM \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11989, 00 UNITS: UG

♥ SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 20DEC79 1841:33 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME:

600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. ØØØKV KEV/CHNL: 0.5003803 \* HALF LIFF RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

UNKNOWN SAMPLE REPORT

ELEME	NT	PEAK ENERGY	PKGNI	) A	REA	CONCEN		L SIGMA ERROR	%ERROR	
%-cop ●%-ant %-ars	IMONY	511. 1 564. 1 657. 4	469 160 63	3.	615. 435. 0. <	0. 031 0. 001 8. 8231E	.6	0. 0003 0. 0001 NOT DEY	1. 1 6. 3 ECTABLE	
• 1115 1124 1133	: 5980	. 1.6536.	1.770. 38809. 709.	1,989. 64932. 600.	2129. 82194. 499.	2023. 84111. 466.	1834. 69373. 444.	42511	2562. 17596. 445.	
1115 1124 1133	: 5980	. 16536.	1.770. 38809. 709.	1989. 64932. 600.	2129. 82194. 499.	2023. 84111. 466.	1834. 69373. 444.		2562. 17596. 445.	
• 1304 • 1310 1319	: 139 : 1.23	. 166. . 112.	132. 188. 148.	125. 244. 131.	135. 244. 133.	233.	148. 21.0. 145.	189.	140. 1.52. 1.06.	
● PK I		ULSE-PIL GY AR				CORRECT CHANNELL		1.000 4 CTS/	SEC XERF	7

1 511.08 10615. 469. 3. 11 1022.56 1011. 25 1.769E 01. 2 1. 564.14 435. 160. 2.32 1128.62 1121 22 7.252E-01

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:04:32 PM \*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 02778

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 6756, 000

UNITS: UG

SAMFILE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 1851:48 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5, 999 ELAPSED REAL TIME: 691. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL, LIB1. DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

UNKNOWN SAMPLE REPORT

2

1

564, 05

252.

150.

ELEMENT		AK RGY	BKGND	AR	EA	CONCENTR		FIGMA KROK	%ERROR
%-COPPER M-ANTIMON %-ARSENIC	7 56	1. 1. 4. 1. 7. 4	282. 150. 104.		174. 152. 0. <	0. 0318 0. 0016 0. 0020	છા.	0005 0002 OT DETE	1. 4 9. 3 CTABLE
1115: 1124: 113%:	7. 14. 6.	6. 12. 12.	7. 35. 13.	9. 41. 10.	7. 53. 6.	7. 52. 7.	11. 46. 8.	9. 28. 5.	13. 14. 11.
1115: 1124: 1133:	7. 1.4. 6.	6. 12. 12.	7. 35. 13.	9. 41. 10.	7. 53. 6.	7. 52. 7.	1.1 46. 8.	9. 28. 5.	13. 14. 11.
1301: 1310: 1319:	11. 9. 8. PULSE	7. 5. 8. :PILE-U	8. 6. 8. JP CORRI	10. 8. 13. ECTED	8. 7. 10. DATA.	11. 10. 9. CORRECTIO	7. 10. 5. ON = 1.	12. 8. 8. 909	7. 10. 7.
_	NERGY 11. 06	AREA 6074.	BKGI	ND F	ынм с	:HNNNEL. ( 8	EFT PW	CTS/S	

2.48

1128. 43 1117

23 4.199E-01

9.3

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0277C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7705.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 20DEC79 1902:02 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

1

\*

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

• ELEMENT		EAK ERGY	BKGND	AR	EA	CONCENTR		IGMA ROR	ZERROR
%-COPPER ● %-ANTIMO %-ARSENI	)NY 5	1.1. 1. 64. 1 57. 4	31.2. 116. 94.		00. 13. 0. <	0. 0292 0. 0018 0. 001.7	0.1	0004 0001 T DETEC	1. 4 7. 5 CTABLE
1115: 1124: 1133:	10. 8. 5.	7. 24. 9.	1.2. 20. 2.	8. 53. 4.	6. 63. 11.	10. 62. 9.	8. 57. 9.	9. 40. 5.	2. 15. 8.
1115: 1124: 1133:	1.Ø. 8. 5.	7. 24. 9.	12. 20. 2.	8. 53. 4.	6. 63. 11.	10. 62. 9.	8. 57. 9.	9. 40. 5.	2. 15. 8.
1301: 1310: 1319:	6. 5. 8. PULS	10. 17. 7. E-PILE-L	7. 4. 7. IP CORR	6. 5. 3. ECTED	4. 4. 8. DATA.	4. 8. 7. CORRECT10	7. 6. 9. N = 1.	7. 5. 4. 000	9. 9. 3.
PK IT	ENERGY	AREA	BKG	ND F	ънт с	HANNEL LE	ЕТ РИ	C:TS/58	EC ZERR
<ul><li>1 1</li><li>2 1</li></ul>	511. 07 564. 13	6300. 313.				.022. 55  10 .128. 60  11		1. 050E 5. 217E-	

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:06:33 PM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1.021:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9530,000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFF1CIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 20DEC79 1912:16 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 1.0.

*\* 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8, 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK EMERGY	BKGND	AREA	CONCENT		1GMA ROR	ZERROR
%-COPPER •%-ANTIMONY %-ARSENIC			6834.	0.0021 0.0318 < 0.0012	8 9.	0004	1.3
1124: 7		18. 588. 1 7.	013. 131	.8. 30. .2. 1335. 8. 9.	1171.	705.	
<b>_ 1124:</b> 7		588. 1		8. 30. 2. 1335. 8. 9.	1171.		
	3. 7.	8.	3. 3.	6. 6. 6. 5.	5.	6. 5.	4. 4. 2.
PK IT ENE	RGY ARE	A BKGN	ю ғынт	CHANNEL L	ЕЕТ РЫ	CTS/SE	C XERR
	06 55 . 1.7 683 :. 01 23	4. 26		1,022, 53 ( 1128, 67 ( 1206, 29 (	1.119 19	9. 161E- 1. 139E 3. 851E-	01 1.3

91119065 QY RF FIFTH 1RRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q278B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12522.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:1:

ACQUISITION DATE: 20DEC79 1922:31 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

STEPPENNERS CONT. TO ST.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4

• ELEMENT	PEAK ENERGY	BKGND	AREA	CO	NCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER •X-ANTIMONY X-ARSENIC	511. 0 564. 2 657. 4	396. 396. 112.	847. 8988. 0.	0.	. 0025 . 0319 . 0011	0.0001 0.0004 NOT DETE	4. 8 1. 1. CTABLE
• 1115: 1 1124: 16 1133: 11		26. 781. 1 11.	.300. 16	30. 73. 1 <sup>.</sup> 9.		39. 43. 68. 986. 8. 9.	52. 431. 7.
1115: 1 1124: 10 113%: 11		26. 781. 1 11.		30. 73. 1 9.		39. 43. 68. 986. 8. 9.	52. 431. 7.
• 1310: 1319:	6. 4. 7. 4. 6. 9. PULSE-PILE	10. 12.	5. 6. 10. CTED DAT	9. 8.	9. 14. 7. PECTION:	4. 6. 9. 11. 7. 5.	12. 3. 8.
	RGY ARE				MEL LEFT		SEC ZERR
2 1. 564	00 84 k. 18 898 k. 92 26	3. 39	)6. 3.29 )6. 2.37  3. 2.39	1128		22 1.498E	01 1.1

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0278C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10425.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

Ж

ACQUISITION DATE: 20DEC79 1932:45 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: *600.* SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:

• ELEMENT	PEAK ENERGY	BKGND	AREH	CONCENTR	1 SI R. ERR		ERROR
X-COPPER X-ANTIMONY X-ARSENIC		339. 331. 108.	635. 71.1.9. 0.	0. 0304		1001. 1004 DETECTAE	5. 7 1. 2 3LE
1124: 1.0	l2. 28. 32. 231. 94. 13.	23. 598. 1. 8.	21. 3 043. 138 9.		32. 1240. 11.	719. 33	48. 14. 13.
	12. 28. 32. 231. 94. 13.	23. 598. 1 8.	21. 3 043. 138 9.		32. 1240. 11.	719. 33	48. 14. 13.
<b>1</b> 340: :	6. 9. L1. 4. L2. 10. PULSE-PILE	8. 9. 10.	8. 9.	5. 7.	7. 7.	3.	4. 1.2. 11.
PK IT EN	RGY ARE			CORRECTION CHANNEL LE		CTS/SEC	%ERR
2 1. 56	1. 01 63 4. 18 711 2. 75 23	9. 33	<b>1. 2.</b> 27	1022, 43 10 1128, 68 11 1205, 77 13	118 21. 1	L 058E 00 L 186E 01 3 862E-01	5. 7 1. 2 8. 6

## 91119065 QY RF FIFTH 1RRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0279

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 12781.00 UNITS: UG

🥏 SAMPILE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

\*

ACQUISITION DATE: 20DEC79 1942:59 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 602. SEC \* SHAPF PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 17ERAT10NS: 10.

man who has a far to the first of the fact 
DETECTOR: GEL1-8 \* L18RARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCF: 2.000KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:**}**:

#### UNKNOWN SAMPLE REPORT

564.14

388.

218.

•	ELEMENT		AK RGY I	BKGND	Ä	REA	******	CONCER	ITR.	1 SI		%E.RRO	)R
	X-COPPER X-ANTIMON X-ARSENIC	44 56		354. 218. 85.		938. 388. Ø.	< 9.	0. 031 0. 001 7824E			903 901 DETEC:	1. 7. TABLE	
•	11.15: 1124: 1133:	11. 6. 9.	14. 15. 6.		7. 76. 10.	9	6. 90. 5.	9. 110. 6.	69	5. 9. 5.	6. 47. 4.	14. 18. 3.	
•	1115: 1124: 1133:		14. 15. 6.		7. 76. 10.		6. 10. 5.	9. 1.10. 6.	69	5. 9. 5.	6. 47. 4.	14. 18. 3.	
•	1301: 1310: 1319:	5. 7. 3. PULSE	2. 5. 5. 5-PILE-U	6. 6. 3. P CORRI	7. 11. 7. ECTED		6. .2. 4. 1. C	6. 9. 6. ORRECT	9	‡. 9. 5. 1. 0	5. 3. 9. 00	6. 6. 4.	
•	PK IT E	ENERGY	FIREA	BKGI	ИD	ЕМНИ	СН	ANNEL	LEFT F	ᅰ	CTS/SE	C: %E	ERR
•		511. 08 526. 23	1 0938. 49.			3. 11 2. 80			1011 1045		. 823E . 112E-	01 1. 02 29.	-

1.93

1128.61 111.7

19 6.469E-01

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0280

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6122.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 20DEC79 1953:14 \* FWHM(1332) 2.390 PRESET TIME(LIVE): SEC \* SENSITIVITY: 600. 5. 000 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 1.0.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L.1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

• ELEMENT		PEAK ENERGY 	BKGND	ARE	H 	CONCENTR.		51GMA ROR	ZERROR	
X-COPPER ■ X-ANTIMO X-ARSENI	ጋኮነት	511. 1 564. 3 657. 4	325. 119. 91.	517 23		0. 0316 0. 0017 0. 0021	7 0. 0002		1. 6 9. 3 ECTABLE	
• 1115: 1124: 1183:	3. 14. 9.	8. 14. 13.	7. 21. 4.	10. 34. 4.	5. 42. 5.	7. 54. 5.	8. 49. 3.	5. 31. 10.	6. 17. 10.	
1115: 1124: 1133:	3. 1.4. 9.	8. 1.4. 1.3.	7. 21. 4.	1.0. 34. 4.	5. 42. 5.	7. 54. 5.	8. 49. 3.	5. 31. 10.	6. 1.7. 1.0.	
1301: 1310: 1319:	2. 7. 9. PUI	9. 7. 5. _SEPILE-	10. 4. 7. -UP CORR	2. 5. 13. ECTED D	9. 9. 8. ATA.	5. 6. 5. CORRECTION	3. 8. 3.   = 1.	5. 10. 2. 000	8. 6. 6.	
PK IT	EMERG	t' AREA	a BKG	MD FW	нм с	HFINNEL LEF	т РЫ	CTS/SI	EC ZERR	

1 1 511.. 09 5177. 325. 3. 19 1022.59 1012 25 8.629E 00 1. 564. 32 232. 1.19. 2.31 1128.97 1120 25 3.863E-01 9.3 1 622, 88 39. 208. 4.82 1246.00 1227 26 6.580E-02 54.1

GSR

SAMPLE DATE: 220CT79 1038:00 SAMPLE IDENTIFICATION: STD1

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.000000 UNITS: UG

🛡 SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

.÷.

ACQUISITION DATE: 20DEC79 2003:28 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1

THE PERSON OF TH

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+

#### UMKNOHN SAMPLE REPORT

1.

657.37

249.

506.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT	1 SIGM R. ERROR	
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2	700.	103679.	0. 6745	0. 002	6 2.0 3 0.3 4 14.4
1115: 258 1124: 1258 1133: 1158	5. 3629.		66. 658. 33. 1.9495. 62. 61.	20537.	17210. 1092	
1115: 250 1126: 1250 1133: 1150	s. 3629.			20537.	1721.0. 1092	6. 581. 1. 4322. 3. 55.
• 1301: 2: 1310: 2: 1319: 2:	3. 33. 9. 32.	50. 29.	67. 66. 21. 21.	77. 20.	78. 5 28. 2	8. 33.
PK IT ENE				CONKECTI CHANNEL L	ON = 1.000 EFT PW CT	S/SEC ZERR
1 1. 510. 2 3 559. 3 3 564. 4 1 602.	34 339; 17 10367;	2. 1.239 9. 700	. 2.91 . 2.33	1022.33 1 1119.01 1 1128.66 1 1205.97 1	107 31 5.6 107 31 1.7	81E 00 2.0 54E 00 2.3 28E 02 0.3 45E 00 2.3

2. 30

1.314. 93 1306 17 4. 142E-01 14. 3

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 02818

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 3815.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

### ACQUISITION DATE: 20DEC79 2013:55 \* FWHM(1332) 2.390
| PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
| ELAPSED REAL TIME: 600. SEC \* SHAPE PARAMETER: 15.0 %
| ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

**>** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1.434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSFT: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

+

ELEMENT		BKGND A		CONCENTR.	1 SIGMA ERROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	1820. 63	705.	Ø. 7478	9. 9 <u>932</u>	0.4
• 1115: 115. 1124: 759. 1133: 723.	2168. 53	868. 9280.	11994.	185. 221 12610. 10768 40. 27	8. 6746.	2831.
1115: 115. 1124: 759. 1133: 723.		140. 154. 368. 9280. 35. 30.	11994.	12610. 10768		2834.
1301: 16. 1310: 14. 1319: 18.	1.2. 9.	11.12.22.15.	14. 16.	10. 1.6 19. 13	5. 14. 5. 11. 3. 16.	12.
PK IT ENERG				CORRECTION = HANNEL LEFT F		EC %ERR
<ul><li>1 1. 511.6</li><li>2 1. 564.1</li><li>3 1. 602.9</li></ul>	.8 63705.	1.820.	2.33 1:	022.41 1.013 128.69 1118 206 07 1196	20 1.062E	02 0.4

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:13:53 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9904, 000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 2024:17 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

657.16

665, 78

1

5727.

416.

1252.

881.

ELEMENT		PEAK VERGY	BKGNI	) F	IREA	CONCE		SIGMA ERROR	ZERROR
%-COPPER •%-ANTIMON %-ARSENIC	44 5	564. 1.	4652 190: 1252	l. 169			<b>'</b> 6	0. 0004 0. 0022 0. 0035	10. 0 0. 3 2. 2
1124: 2	2046. 2473. 1937.	4604. 6373. 461.	7982. 14556. 232.	1.0542. 25378. 1.86.	11193 32628 206	. 33803.	28020.	3121. 17133. 182.	1607. 7168. 162.
1124: 2	2046. 2473. 1937.	6373.	7982. 14556. 232.	10542. 25378. 186.	11193 32628 206	. 33803.		3121. 17133. 182.	1607. 7168. 162.
• 1310: 1319:	1.71. 1.39.	373. 94.	81.	89. 967. 63. RRECTED	1.089 80	. 1201	71.	587. 73.	103. 287. 75.
PK IT E	EMERGY	FIRE	EA BI	KGND	FWHM	CHANNEL	LEFT PA	CTS/9	SEC %ERR
2 2 5 3 2 5 • 4 1 6	511. 04 559. 20 564. 15 502. 79	1.02 5474 1.6941 472	‡5. ; 33. ; 22. ;	2264. 1901. 2096.	2. 31 2. 31 2. 44	1022. 48 1118. 74 1128. 62 1205. 85	1107 3 1.107 3	.6 1. 7008 :4 9. 1248 :4 2. 8248 :2 7. 8708	E 01. 0.4 E 02 0.2
	545. 92	37	??. :	1120.	2. 82	1292. 04	1.285 1	4 6. 291	5-01 13.6

2. 41.

2.38

1314.50 1307

16 9.545E 00

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC: 1979 3:15:00 PM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9371, 000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF, TAB1

ACQUISITION DATE: 20DEC79 2035:00 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SENSITIVITY: 600. SEC 5. 000 ELAPSED REAL TIME: 628. SFC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

1.

657.14

665, 68

5003.

319.

1076.

674.

ELEMENT	PEAK ENERGY	BKGND	A	REA	CONCEN		SIGMA ERROR	ZERROR
X-COPPER • X-ANTIMONY	510. 9 564. 1	4436. 2255.	157	123.	0. 003 0. 753	7	0. 0004 0. 0022	12. 8 0. 3
%-ARSENIC	657. 1	1076.	S	003.	0. 1.49	98	0. 0034	2. 3
• 1115: 186: 124: 211: 113%: 184:	9. 5827.	7064. 1.3743. 7 199.	9127. 23403. 1.78.	9687. 29967. 146.	30864.		2638. 16348. 112.	1535. 6781. 148.
1115: 186: 1124: 211: 1133: 184:	9. 5827.		9127. 23403. 178.	9687. 29967. 146.	30864.	25754.	2638. 1.6348. 112.	1535. 6781. 148.
1304: 7: 1310: 13: 1319: 12:	5. 273.	64.	81. 832. 58. Foter	82.	. 1048. 71.	833. 54.	69.	87. 254. 54.
PK IT ENE					CHANNEL			SEC: %ERR
<ul> <li>1 1 510.</li> <li>2 2 559.</li> <li>3 2 564.</li> <li>4 1 602.</li> </ul>	. 20 472: . 15 1571:	93. 2: 23. 2:	378. 255.	2. 31 2. 34	1.022. 14 1.118. 73 1.128. 63 1.205. 82	1109 3 1109 3	6 1. 2816 7 7. 8826 7 2. 6196 8 7. 3386	01 0.5 02 0.3
5 1 645	. 93 4				1292.05		o 7.3306 4 8.1066	

2.37

2.38

1314.47 1307

1331. 54 1327

16 8.338E 00 1.7

11 5.320E-01 1.2.8

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DFC79 1021:00 SAMPLE IDENTIFICATION: 0308 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8982.000 UNITS:

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL.

:4:

UG

ACQUISITION DATE: 20DEC79 2045:41 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

ELEMENT		EAK ERGY	BKGMI	) AI	AREA			. SIGMA ERROR	ZERROR	
%-COPPER %-ANTIMON %-ARSENIC	NTIMONY 564		1958. 1.53:		372. 369. 163.	369.		0. 0004 0. 0023 0. 0037	11. 1 0. 3 2. 3	
1124: 2		4156. 5542. 418.	7467. 13358. 199.	9714. 22727. 175.	10039. 28976. 172.	8735. 30242. 176.	5826. 25397. 128.	2852. 15836. 143.	1562. 6753. 150.	
1115: 1 1128: 2		4156. 5542. 418.	7467. 13358. 199.	9714. 22727. 175.	10039. 28976. 172.	8735. 30242. 176.	5826. 25397. 128.	2852. 15836. 143.	1562. 6753. 150.	
	59. 158. 112.	92. 269. 80.	66. 535. 81.	72. 803. 67.	74. 1072. 76.	83. 1030. 75.	69. 913. 53.	82. 557. 62.	99. 292. 72.	
<b>A</b>	F'UL.5	E-PILI	UP CO	RECTED	DATA.	CORRECT	ION =	1.000	'	

	PK	1.1	ENERGY	AREA	BKGND	ғ'ынм	CHANNEL	L.EFT	PW	CTS/SEC	ZERR
•	1	1.	510.86	872.	4208.	3. 09	1022. 13	1014	16	1 453E 00	11. 1.
	2	2	559. 20	50392.	2127.	2. 33	1118.73	1107	35	8. 399E 01	0.5
	3	2	564. 16	153369.	1958.	2. 34	1128. 64	1107	35	2.556E 02	0.3
•	4	1.	602. 80	4188.	1512.	2. 30	1.205. 87	1197	1.8	6.981E 00	2. 0
	5	1.	645. 98	354.	907.	2. 74	1292. 16	1286	13	5. 892E-01	13.2
	6	1.	657. 20	51.63.	1370.	2. 36	1314, 59	1305	21	8. 605E 00	1. 7
•	7	1	665. 60	353.	783.	2. 73	1331, 38	1326	13	5.8798-01	1.2. 4

🕨 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0309 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11117.00

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAD1

:4:

:4:

UNITS:

UG

ACQUISITION DATE: 20DEC79 2056:23 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434-06 \* ENERGY TO FRANCE:

:4:

#### UNKNOWN SAMPLE REPORT

1

665, 38

488.

816.

• ELEMENT	PEAK ENERGY	BKGNI	) A	REA	CONCE		SIGMFI ERROR	ZERROR
M-COPPER M-ANTIMONY M-ARSENIC	564. 1	4934 2046 161	5. 176	785.		<sup>2</sup> 6	0. 0004 0. 0020 0. 0032	7. 6 0. 3 2. 2
• 1115: 208 1124: 237 1132: 209	'8. 6649.	7977. 1.5401. 257.	10459. 26321. 225.	10839 33786 196	. 35210.	29084.	3058. 17998. 155.	1675. 7637. 167.
1115: 208 1124: 237 1133: 209	°8. 6649.	7977. 15401. 257.	1.0459. 26321 225.	10839 33786 196	. 35210.	29084.	17998.	1675. 7637. 167.
1301: 8 1310: 17 1319: 13	°7. 288.	620. 76.	98.	1.147 85	. 11.93.	71.	591. 79.	1.09. 280. 78.
PK IT ENE	ERGY AR	EA BI	(GND	FWHM	CHANNEL	LEFT P	l CTS/S	SEC MERR
2 2 559 3 2 564 • 4 1 603	. 32 1.4 ) 20 543   15 1.767   79 48   16 55	39. 2 85. 2 06. 2	2661. 2046. 2085.	2. 34 2. 32 2. 30	1023. 04 1118. 73 1128. 62 1205. 85 1314. 51	1107 3 1107 3 1197 3	.7 2.3396 ?7 9.0566 ?7 2.9466 20 8.0106	01. 0.4 02 0.2 00 2.0

2.83

1330.94 1325

12 8.138E-01

9.4

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q310

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9123.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+

ACQUISITION DATE: 20DE.C79 2107:09 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

•	ELEMENT		PEAK ENERGY	BKGNI	) AI	REA	CONCEN		. SIGMA ERROR	%ERROR
	%-COPPE %-ANTIM %-ARSEN	יראס	511. 3 564. 2 657. 2	3539 1694 1203	4. 151:	909. 159. 595.	0. 004 0. 749 0. 143	1	0. 0004 0. 0023 0. 0034	9, 8 0, 3 2, 3
•	1115: 1124: 1133:	1717. 1995. 1753.	3844. 5454. 408.	6745. 13107. 187.	8832. 22304. 178.	9216. 28977. 172.	7858. 29507. 1.47.	5420. 25226. 148.	2590. 15545. 125.	1412. 6630. 139.
•	1115: 1124: 1133:	1717. 1995. 1753.	3844. 5454. 408.	6745. 13107. 187.	8832. 22304. 178.	9216. 28977. 172.	7858. 29507. 1.47.	5420. 25226. 148.	2590. 15545. 125.	1412. 6630. 139.
•	130%: 1310: 1319:	70. 134. 97.	67. 243. 63.	65. 487. 42.	78. 767. 69.	91. 988. 63.	69. 940. 64.	76. 798. 58.		72. 243. 57.
•		Pl	JLSE-PIL	E-UP CO	RRECTED	DATA.	CORRECT	10M =	1. 000	

PK IT ENERGY AREA BKGND F'WHM CHRINNEL LEFT PW CTS/SEC **XERR** 1 1. 511. 25 909. 3539. 3, 21 1022.91 1016 14 1.515E 00 9. 8 45722. 2 2 559, 20 2053. 2.33 1118.74 1108 35 7.620E 01 0.5 3 2 35 2.519E 02 564. 16 151159. 1694. 2.33 1128.64 1108 0.3 4 1 602.83 4077. 1428. 2.38 1205.92 11.98 17 6.795E 00 2. 9 5 1 646.00 260. 2.09 813. 1292. 21 1286 12 4.328E-01 16.7 6 657. 17 4595. 2.31 1314. 52 1307 1. 1202. 18 7.658E 00 1.8 1 665. 76 237. 712. 2.32 1331.70 1327 11 3.949E-01 17.2

\*\*\*\*\*\*\* 21 DEC: 1979 3:19:21 PM \*\*\*\*\* \* 

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DFC79 1021:00 SAMPLE IDENTIFICATION: 0311 TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9118, 000 UMITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 2117:47 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

DETECTOR: GEL 1-8 \* LIBRARY: MUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

665, 51,

168.

350.

ELEMENT		PEAK NERGY	BKGNI	) F	IREA	CONCE		SIGMA ERROR	%ERROR
%-COPPER %-ANTIMO %-ARSENI	NY 5	511. 0 564. 2 557. 2	329: 123: 42:	ð. 125	0. ( 1783. :584.	0. 001 0. 624 0. 112	18	NOT DETI 0. 0020 0. 0027	ECTABLE Ø. 3 2. 4
• 1115: 1124:	1257. 1650. 1584.	2866. 4380. 309.	5080. 10738. 118.	, 6553. 18486. 112.	-564. 6869 24067. 118	5883. 24885.	4075. 20784. 103.	e. ee2r 2022. 13076. 98.	2. 4 1129. 5682. 94.
1124:	1257. 1650. 1584.	2866. 4380. 309.	5080. 10738. 118.	6553. 1.8486. 112.	6869 24067 118	24885.	4075. 20784. 103.	2022. 13076. 98.	11.29. 5682. 94.
1309: 1310: 1319:	64. 97. 70. PUL:	51. 198. 68. SE-PILE	45. 380. 51. E-UP CO	46. 589. 41. RRECTED	734 48	727. 48.	694. 38.	65. 376. 34. 1. 000	59. 200. 41.
PK IT	ENERGY	ARE	EA BI	KGND	FWHM	CHANNEL	LEFT PM	l CTS/:	SEC XERR
2 2 3 1.	559. 21 564. 16 602. 84 645. 40		33. 30.	1733. 1230. 1144. 588.	2. 32 2. 28	1118. 75 1128. 65 1205. 95 1291. 01	1107 3 1198 1	:5 5. 721.1 :5 2. 0961 :6 5. 6661 :0 3. 1.781	E 02 0.3 E 00 2.2
5 3	657. 16			425.		1314. 51		4 5. 974	

1.96

1331. 20 1304

34 2.803E-01.17.5

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0312

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9292.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+

ACQUISITION DATE: 20DEC79 2128:21 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:1

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

657.19

665.53

1

5320.

365.

1178.

717.

ELEMENT	PEAK ENERGY	BKGND	<u> </u>	REA	CONCEN		SIGMR FRROR	ZERROR
X-COPPER X-ANTIMONY X-ARSENIC	511, 2 564, 2 657, 2	4180 1876 1178	. 154	859.	0. 004 0. 756 0. 164	3	0. 0004 0. 0023 0. 0036	9. 2 0. 3 2. 2
1124: 20	37. 4080. 80. 5622. 20. 419.	1.3252.	9573. 22875. 1.68.	9956. 29542. 1.46.	30337.		2766. 1.6208. 138.	1508. 6801. 1.49.
1124: 20	37. 4080. 80. 5622. 20. 419.	1.3252.	9573. 22875. 168.	9956. 29542. 146.	30337.	5705. 2561.5. 152.	2766. 16208. 138.	1508. 6801. 149.
1301: 1310: 1319: 1	48. 250. 04. 62.	548.	76. 858. 80. RECTED	1080. 69.		907. 61.	52.	108. 245. 64.
PK IT EN	ERGY AI	REA BK	GND	ЕМНМ (	CHANNEL.	LEFT PW	CTS/9	SEC %ERR
2 2 55 3 2 56	4.16 154	245. 2 859. 1	:098. .876.	2. 34 : 2. 34 :	1128. 65	1108 3 1108 3	6 1. 7648 1 8. 2078 1 2. 5818	: 01 0.5 : 02 0.3
	2. 80 4: 5. 93 -		.492. 517.				7 7.1658 8 3.7798	

2.38

2.69

1314.57 1306

1331. 23 1326

19 8.867E 00 1.6

12 6.091E-01 11.6

🕨 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0313A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9715.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

\*

ACQUISITION DATE: 20DEC79 2139:04 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

-4

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:#:

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR	1. SIGI R. ERROI	** *
%-COPPER ●%-ANTIMONY %-ARSENIC	564. 2	7196.	177545.	0.8309	Ø. 00:	37 1.3 24 0.3 DETECTABLE
<pre>1115: 325 1124: 2218 113%: 2053</pre>	. 6166. :	14921. 26:	524. 635. 291. 33977. 119. 108.	36097. 3		
1115: 325 1124: 2218 113%: 2053	. 6166. :	14921. 26;	524. 635 291. 33977 119. 108	36097. 3		
1301: 47 1310: 65 1310: 39	. 47. . 37.	60. 59.	69. 58 37. 35	. 69. . 39.		46. 54. 36. 41.
PK IT ENER				CHANNEL LE		TS/SEC %ERR
1 1 511. 2 1 564. 3 1 602. 4 1 645.	17 17754 77 484	8. 1.65	6. 2.30 6. 2.35	1022. 50  10 1128. 68  1: 1205. 81  1: 1291. 75  1:	120 19 2.: 197 25 8.:	074E 01 1.2 959E 02 0.2 080E 00 1.9 747E-01 13.1

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q313B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8555.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TAB1

\*

\*\*

ACQUISITION DATE: 20DEC79 2149:42 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SFC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4

ETERMOTI. OF T A

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

KEY/UHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%

:1:

#### UNKNOWN SAMPLE REPORT

1

645, 96

354.

588.

ELEMENT	PEAK ENERGY	BKGND	F	RÉA	CONCEN		SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	1.420.	. 161	.883.	0.861	9	0. 0025	Ø. 3
1115: 305 1124: 1942 1133: 1918	2. 5461.	1.3282. ·		30660.		27087.		7089.
1115: 305 1124: 1842 1133: 1916	2. 5461.	13282.		627. 30660. 113.	32214.	27087.	606. 17194. 84.	7089.
1310: 4· 1319: 3;		57. 32.	60. 30.	57. 44.	70. 44.	52. 42.	63. 45.	
PK IT ENE							4 CTS/:	BEC XERR
<ul> <li>1 1 511.</li> <li>2 9 559.</li> <li>3 9 564.</li> <li>4 1 602.</li> </ul>	76 18: 18 1.618:	31. 1 83. 1	095. 420.	1. 30 : 2. 32 :	1.022, 53 1.1.19, 85 1.1.28, 68 1.2.05, 87	1111 3	21 1. 9471 88 3. 0521 88 2. 6981 20 7. 2031	= 00 3.5 = 02 0.3

2.86 1292.13 1286 13 5.906E-01 11.0

\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:23:38 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOHN

SAMPLE QUANTITY: 9281.. 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICKENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 2200:16 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SENSITIVITY: 600. SEC 5.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 1.0.

DETECTOR: GEL 1-8

\* LIBRARY: NUCL LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

• ELEMENT	PEAK ENERGY	BKGND	) <u>F</u>	IREA	CONCE		L SIGMA ERROR	%ERROR
%-COPPER •%-ANTIMONY %-ARSENIC	564. 2	6671 7515 670	i. 171	:51.0. .132. 0. <	0. 841	L5	0. 0008 0. 0025 NOT DETI	
1124: 21	:81. 440. .24. 6047. 145. 425.	14484.	567. 25366. 148.		34513.	29170.	17833.	879. 7633. 91.
1124: 21	:81. 440. :24. 6047. )45. 425.		567. 25366. 148.		. 34513.		17833.	879. 7633. 91.
• 1310: 1319:	48. 48. 50. 44.	55. 42.	48. 48.	39. 70. 32.	. 74. . 38.		56. 46.	
PK IT EN		REA BK	GND		CURRECT	CION = LEFT PW		SEC XERR
2 1 56 3 1 68	.1. 03	132. 7 340. 1	'515.	2. 30 2. 32	1.022. 48 1.128. 67 1.205. 89 1.292. 58	1120 3 1.194 3	28 2. 085  20 2. 852  20 8. 067  1.4 5. 332	E 02 0.3 E 00 1.8

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:24:44 PM \*\*\*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q314A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8934, 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DFC79 2210:54 \* FWHM(1332) 2. 390 PRESET TIME(LIVE): 600. SFC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 1.0.

:4:

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

2. 000KV \* HALF LIFE RATIO: 8. 99

KEV/CHNL: 0.5003803

UG

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

657.15

344.

499.

• ELEMENT	PEAK ENERGY	BKGND	A	REA	CONCEN		SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY	511. 0 564. 2	5088. 1.1.95.		461. 779.	Ø. 78 <b>1</b>	.9 (	a. 0007 a. 0023	1. 6 0. 3
%-ARSENIC	<i>6</i> 57. 2	499.	,	344.	0. 01.1	.3 (	a. 0012	10. 7
<pre>1115: 38 1124: 183 1133: 185</pre>	?7. <b>5245</b> .	559. 12706. a 128.	665. 2487. 1.05.	690. 29302. 103.	667. 30324. 90.	617. 25549. 112.	621. 15883. 76.	844. 6629. 96.
1115: 30 1124: 183 1133: 185	7. 5245.	559. 12706. a 128.	665. 22487. 105.	690. 29302. 103.	667. 30324. 90.		621. 1.5883. 76.	844. 6629. 96.
	39.	29. 57. 26. E-UP CORF	34. 81. 27. KECTED	39. 59. 40. DATA.	72. 27.	31. 54. 29. TON = :	35. 69. 36. 1. 000	35. 60. 34.
PK IT EME	RGY AR	EA BKO	3ND	FЫНМ (	CHANNEL.	LEFT PW	C75/9	SEC %ERR
2 4 559		·25. 20	925.	3.07 :	l 022. 49 l 1.19. 40 l 128. 66	1108 3	7 5. 7098	00 2.5
	?. 81.        42 5. 81.				l 205.88 l 291.82	1.198 1. 1286 1.		

4.01

1314.49 1308

15 5.736E-01 10.6

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0314B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9534.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 20DEC79 2221:29 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 622. SEC \* SHAPP PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1
DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

:10

# UNKNOWN SAMPLE REPORT

:1.

645, 97

361.

585.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	1354.	166167.	Ø. 7984		0.3
• 1115: 333. 1124: 2027. 1133: 1981.	5824.	13915. 24	693. 749 449. 31676 99. 116			920. 7246. 95.
1115: 333. 1124: 2027. 113%: 1981.	5824.	1.3915. 24		9. 708. 5. 33034. 21 5. 108.		
<ul><li>1310: 43:</li><li>1319: 41.</li></ul>	50. 33.	61. 30.	64. 89 35. 39	3. 66, 9. 36.		44.
PK IT ENERG					N = 1.000 FT PW CTS/S	SEC ZERR
1 1 511.6 2 6 559.5 3 6 564.5 4 1 602.7	54 367 17 16616	'9. 218 7. 135	35. 3.03 <sup>°</sup> 34. 2.31.	1022, 53 10: 1119, 41 11: 1128, 66 11: 1205, 85 11:	08 43 6. 1.32E 08 43 2. 769E	: 00 2.4 : 02 0.2

2. 50

1292. 15 1287

14 6.016E-01 10.8

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q314C

'SHMPLE IDENTIFICATION: Q314C TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10027.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

+:

ACQUISITION DATE: 20DEC79 2232:04 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2,000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

G

1.

1

564. 17

602, 82

645.77

174238.

4664.

326.

ELEMENT	PEAK ENERGY I	SKGND F	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2		9748. 1238. Ø. (	0. 0463 0. 7975 0. 0038	0.0007 0.0023 NOT DETE	1. 4 0. 3 CTABLE
• 1115: 327 1124: 2027 1137: 1994	. 5990. 14:	325. 732. 239. 25711. 152. 155.	33063,	749. 768 34516. 29056 134. 103	5. 18351.	952. 7731. 93.
1115: 327 1124: 2027 1133: 1994	. 5990. 14	525. 732. 239. 25711. L52. 155.	33063.	749. 766 34516. 29056 134. 10:	5. 18351.	952. 7731. 93.
1301: 40 1310: 47 1319: 54	. 44. . 43.	56. 80. 41. 48.	68. <i>•</i> 52.	48. 4: 74. 7: 47. 4: CORRECTION =	5. 61. 3. 41.	43. 58. 47.
PK IT ENER	GY AREA	BKGND	FWHM C	HANNEL LEFT I	PW C:TS/S	EC ZERR
<ul><li>1 1 511.</li><li>2 6 559.</li></ul>		5284. 2231.		022.53 1011 119.49 1110	23 1.791E 32 6.530E	

2.32

2. 24

2.77

1128.67

1205.91.1198

1291.75 1285

1110

32 2.904E 02

20 7.773E 00

15 5.439E-01 13.0

0.2

1.8

1313.

1320.

21 DEC 1979 3:28:15 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q315A

TYPE OF SAMPLE: UNKNOWN SAMPLE QUANTITY: 8679, 999

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

UNITS:

ACQUISITION DATE: 20DEC79 2242:38 \* FWHM(1332) 2.390PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GEL I-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* FIEUNDFINCE LIMIT: 85. 00%

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## UNKNOWN SAMPLE REPORT

ELEMENT		PEAK ENERGY	BKGM	) AI	REA	CONCEN	TR.	SIGMA ERROR	%ERROR
%-COPPER %-ANTIMO %-ARSENI	ONY	511. 0 564. 2 657. 3	4970 946 450	5. 1.36	355. 331. 347.	0. 035 0. 721 0. 011	4	0. 0007 0. 0022 0. 0012	1. 9 0. 3 10. 3
1115:	286.	425.	584.	668.	719.	675.	606.	576.	715.
1124:	161.8.	4618.	11319.	19844.	25865.	26863.	22838.	14260.	5988.
1133:	1563.	297.	122.	85.	82.	90.	81.	65.	75.
1115:	286.	425.	584.	668.	719.	675.	606.	576.	715.
1126:	161.8.	4618.	11319.	1.9844.	25865.	26863.	22838.	14269.	5988.
1133:	1563.	297.	122.	85.	82.	90.	81.	65.	75.
• 1301:	37.	37.	48.	31.	40.	34.	28.	25.	34.
1310:	47.	40.	43.	61.	76.	76.	77.	39.	38.
1319:	28.	26.	38.	37.	30.	39.	34.	33.	33.
ala anit al al e e		LSE-PIL		sr. RRECTED		S9. CORRECT		.کک 1 000	.کک

PK IT ENERGY AREA BKGMD FMHM CHANNEL LEFT PW CTS/SEC XERR 1 1 511.. 05 7055. 4970. 3.09 1022, 51, 1011 28 1.176E 01 1.8 3 559.39 3571. 1479. 2.83 1119.11 1107 5. 952E. 00 2.3 37 3 564. 17 136031. 946. 2.32 1128.68 1107 37 2. 267E 02 0.3 1 602.81 3733. 837. 2. 32 1205.89 11.96 18 6. 221E 00 2.0 5 1. 646.09 316. 468. 3. 19 1292.39 1286 13 5. 270E-01 11. 2 1. 657.35 347. 450. 3. 63 1314.88 1308 15 5.789E-01.10.2

\*\*\*\*\* 21 DEC 1979 3:29:24 PM \*\*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q315B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10397, 00 UNITS: LIG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 2253:09 \* FWHM(1332) 2. 390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5.090 ELAPSED REAL TIME: 622. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GEL I-8 \* LIBRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

5

1

1.

645.82

656.95

306.

275.

616.

722.

ELEMEINT	PEAK ENERGY	BKGND	A	REA	CONCEN		SIGMA ERROR	%ERRO	R
%-COPPER %-ANTIMONY %-ARSENIC	511. 0 564. 2 657. 0	7681 1355 722	. 8 . 163	 457. 958. 275.	0. 035 0. 726 0. 007	8 4 9	 0. 0007 0. 0021 0. 0012	1. 0. 15.	
1115: 3 1124: 19 1133: 19	71. 5403.	13703.	24118.	778. 31297. 97.	32625.		705. 1.7165. 116.		
1115: 3 1124: 19 1133: 19	71. 5403.		24118.	31297.	32625.	27337.	705. 17165. 11.6.	7251.	
• 1310: 1319:		69. 27.	88. 51.	94. 34.	76. 36.	78. 39.	53. 38.		
PK IT EN	ERGY AF	EA BK	GND	<b>Г</b> ЫНМ (	:HANNEL	LEFT PW	CTS/S	EC: %E	.RR
2 4 55 3 4 56		i59. 1 i58. 1	681. 934. 355. 173.	2. 58	1022. 46   119. 24   128. 67   1205. 93	1112 2 1112 2	3 1.410E 7 5.932E 7 2.733E 9 7.654E	99 2. 92 9.	4 2

2.19

2.38

1291.85 1284

1.31.4. 09 1.305

14 5.092E-01 12.8

19 4.585E-01 15.1

\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:30:26 PM \*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*

# 91119065 QY RF F1FTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0315C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8299, 000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 20DEC79 2303:43 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SFC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2. 000KV

0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

656.91

228.

393.

ELEMENT		PEAK VERGY	BKGNE	) A	REA	CONCE	: ITR:	J SIGMA ERROR	ZΕI	RROR
X-COPPER •X-ANTIMO X-ARSEN	DNY 5	511. 0 564. 2 556. 9	3669 1096 393	5. 133	919. 235. 228.	0. 037 0. 746 0. 008	99	0. 0007 0. 0023 0. 0012	,	1. 8 0. 3 1.4. 0
1115: 1124: 1132:	355 1971. 1951.	450. -5403. -414	663. 13703. 166.	745. 24118. 130.	778 31297 97		729. 27337. 93.	17165.	83: 725: 10:	1
111.5: 1124: 1133:	355. 1971. 1951.	450. 5403. 414.	663. 13703. 166.	**************************************	778 778 79 97	. 32625. . 128. . 808. . 32625.	729. 27333 83	795 17165. 116. 43.	) 83: 725: 10:	А
1301: 1310: 1319:	57. 40. 40. PULS	44. <u>-</u> <del>8</del> 8. 42. 5E-P1LE	59. 27.	45. 88. 51. RRECTED	94 34	. 76.	78. 39.	. 53.	4	<b>4</b> ‰ 6. 6.
PK IT	ENERGY	ARE	EA BI	KGND	FWHM	CHANNEL	LEFT P	W CTS/S	BEC:	ZERR
1 1 2 2 3 3 2 4 1 5 1	511. 02 559. 50 564. 18 602. 84	69: 307 1332: 36:	73. : 35. : 85.	3669. 1735. 1096. 996.	2. 68 2. 31 2. 31	1022. 46 1119. 34 1128. 69 1205. 95	1111. 1111 1196	22 1. 1538 34 5. 1218 34 2. 2218 22 6. 1428	= 00 = 00	1.7 2.6 0.3 2.0
5 1	645. 94	و کیا ماند	76.	500.	2. 91.	1292. 08	1284	16 6. 270l	91	9. 9

2.82

1314.01.1309

12 3.802E-01 14.0

21 DEC 1979 3:31:33 PM \*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*\*\* 

### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 211.8. 000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:4:

UG

ACQUISITION DATE: 20DFC79 2314:14 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600.1 SEC \* MBR ITERATIONS: 10.

**,** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KFV \* ABUNDANCE LIMIT: 85.00%

UNKNOWN SAMPLE REPORT

ELEMENT	00 00000 10000 <u></u> 0 000 000 000 000 000 000 000 000	PEAK ENERGY	PKGND	Al	REA	CONCENT		SIGMA ERROR	ZERROR
%-COPPER %-ANTIMO %-ARSENI	)N'+'	511. 0 564. 2 657. 4	1.260. 186. 1.65.	340	953. 371. 146.	0. 0837 0. 7438 0. 0207	1	9. 0018 0. 0042 0. 0031	2. 1. 0. 6 15. 0
1115: 1124: 113%:	96. 369. 397.	149. 1068. 71.	209. 2735. 32.	273. 4939. 20.	284. 6341. 13.	274. 6786. 10.	184. 5720. 14.	188. 3700. 19.	1.83. 1566. 13.
1115: 1124: 113%:	96. 369. 397.	149. 1068. 71.	209. 2735. 32.	273. 4939. 20.	284. 6341. 13.	274. 6786. 10.	184. 5720. 14.	188. 3700. 19.	183. 1566. 13.
1301: 1310: 1319:	12. 20. 14. PU	19. 20. 13. LSF-PILE	4. 18. 8. F-UP CORI	1.5. 27. 8. RECTED	20. 34. 13. DATA.	15. %5. 9. CORRECTIO	13. 33. 7. ON =	17. 28. 14. 1. 000	16. 12. 10.

PK IT ENERGY AREA BKGND CHANNEL LEFT PW FWHM CTS/SEC **XERR** 1 :1. 511. 04 3953. 1260. 2.94 1022.49 1012 24 6.589E 00 2.0 2 3 559.33 1478. 338. 2.70 1119.00 1109 29 2.463E 00 3.1 3 564. 19 34071. 186. 2.32 1128.72 1109 29 5.679E 01 0.5 1 602.91 972. 290. 2.26 1206.09 1195 19 1.619E 00 4. 1. 1 657, 44 146. 165. 2.80 1315.06 1307 15 2.428E-01 15.0

\*\*\*\*\* 21 DEC 1979 3:32:36 PM \*\*\*\*\*\* \*

# 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0317

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1837.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 2324:32 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1 DATE CALIBRATED:

2600779 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

-	ELEMENT		PEAK ENERGY	BKGND	Ä	REA	CONCENTR		. SIGMR ERROR	ZERROR
	%-COPPE %-ANTIM %-ARSEN	CINY	511. 0 564. 2 657. 4	1124. 198. 226.		200. 174. 0. (	0. 0542 0. 7104 0. 0120		0.0017 0.0044 NOT DET	3. 1 0. 6 ECTABLE
•	1115: 1126: 1137:	85. 352. 372.	1.1.0. 932. 66.	162. 2229. 17.	184. 4126. 1.3.	217. 541.2. 14.	169. 5647. 16.	163. 4736. 17.	121. 3011. 7.	163. 1238. 9.
•	1115 : 1128 : 1138 :	85. 352. 372.	110. 932. 66.	162. 2229. 17.	184. 4126. 13.	217. 5412. 14.	169. 5647. 16.	163. 4736. 17.	1.21. 3011. 7.	163. 1238. 9.
•	1304: 1310: 1319:	19. 6. 10. PU	1.4. 22. 14. LSE-P1LE	1.4. 19. 15. :-UP CORF	15. 16. 9. RECTED	12. 21. 10. DATA.	16. 28. 11. CORRECTIO	14. 29. 14. DN =	20.	10. 16. 11.
•	PK IT	ENERG	Y ARE	A BKI	RND	гынм с	HANNE'I II	FFT DI	1 パエニノ	cer veo:

٣	-'K	1.1.	ENERGY	AREA	BKGND	ғ.МНы	C:HANNE:L.	LEFT	PΜ	CTS/SEC	%ERR
•		1 4	511. 02 559. 36	2200. 1.054.	1.124. 386.		1022. 45 1119. 06			3.667E 00 1.757E 00	3. 0 4 1
	4	1 1	564, 18 602, 88 645, 96	289 74. 806. 76.	198. 543. 182.	2. 29 2. 26	1128. 69 1.206. 03 1292. 12	1109 1185	29 35	4.696E 01	0. 6 5. 4

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC: 1979 3:33:38 PM \*\*\*\*\*\*\*\* \*

### 91119065 QY RF FJFTH JRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 354, 9999 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 20DEC79 2334:51 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 602. SEC: \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GFL 1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* REUNDANCE LIMIT: 85, 00%

## UNKNOWN SAMPLE REPORT

ELEMENT		EAK ERGY	BKGND	F	IREA	CONCEN		SIGMA ERROR	ZERROR
%-copper %-ANTIMON° %-ARSENIC	r' 50	54. 2	122.	=	648.		14	0. 0048 0. 01.01 NOT DETE	
1115: 1124: 1138:	69.	31. 167. 20.		52. 814. 6.	1097.	1.1.78.		33. 585. 7.	
1115: 1124: 1138:	69.	31. 167. 20.	459.		1097.	1178.		33. 585. 7.	36. 259. 10.
<b>131.0</b> :	10. 9.	3. 1.0.	9. 5.	9. 6.	14. 10.		11. 4.	7. 11.	10. 9. 8.
PK IT E	NERGY	FIREA	BKG	ND	<b>Г</b> ШНМ (	CHANNEL	LEFT PW	CTS/S	SEC ZERR
2 2 5	11. 1.6 59. 43 64. 20 02. 92	798. 232. 5648. 145.	1. 1	85. 44. 22. 27.	2. 34 2. 23	1.022. 73 1119. 20 1128. 73 1206. 11	1113 3 1113 3	9 1.3306 3 3.8716 3 9.4146 3 2.4116	E-01 9.8 E 00 1.4

91119065 QY RF FIFTH IRRADIANION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0319

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 564.0000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIFNCY FILE NAME: EFF. THEIL

:#:

ACQUISITION DATE: 20DEC79 2345:04 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

.....

DETECTOR: GELI-8 \* L1BRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KFV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

1.

602.89

293.

253.

ELEMENT		EAK ERGY	BKGMD			CONCEN		SIGMA RROR	%ERROF	<b>.</b>
%-COPPER %-ANTIMON' %-ARSENIC	r' 5:	64. 2	143.	5	U39.	0. 753	3 8	. 0081	1. 1	-
1124:	1.04.	27. 311. 25.	729.	1310.	1755.	82. 1826. 15.	1566.	1005.	426.	
<b>112</b> 4: :	104.	311.		69. 1310. 11.		1826.	1566.	51 1005. 16.		
<b>1310</b> :	13. 6.		14. 11.	10. 15.	17. 12.	13. 12. 9. CORRECT	13. 8.	1.1.		
PK IT E	NERGY	FIREA		GMD		CHRINNEL			SEC ZER	₹R
2 5 5	11. 11 59. 66 64. 20	1035. 298. 9139.	2	151. L44. I43.	1.80	1022. 63 1119. 66 1128. 73	1109 33	)	01 8. 1	1

2. 36

1206.05 1196

23 4.886E-01.

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0320A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10169.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: FFF. TAB1

\*

:#:

ACQUISITION DATE: 20DEC79 2355:18 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

يعد يعد يعدر المدار 
DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

## UNKNOWN SAMPLE REPORT

1.

1.

602.87

645.93

4243.

240.

ELEMENT	PEAK ENERGY	BKGND F	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2		1816. 4716. 0. <	9. 9541 9. 6628 9. 9932	0. 0007 0. 0021 NOT DETE	1. 4 0. 3 CTABLE
• 1115: 247 1124: 1584 1133: 1639	. 4722. 12	347. 449. 828. 21544. 138. 94.	27629.	28781. 2458	9. 577. 5. 15429. 2. 70.	81.9. 6313. 86.
1115: 247 1124: 1584 1133: 1639	. 4722. 12	347. 449. 028. 21544. 130. 94.	27629.	28781. 2458	79. 577. 15. 15429. 12. 70.	819. 631.3. 86.
1304: 46 1310: 26 1310: 34	. 42. . 29.	44. 32. 47. 46. 37. 32. P CORRECTEI	44. 42.	47. 3	.0. 39. :1. 56. :4. 40. : 1. 000	32. 31. 31.
PK IT ENER		BKGND		HAMMEL LEFT		SEC: XERR
<ul><li>1 1 511.</li><li>2 1 564.</li></ul>		5285. 5263.		022.46 1011 128.68 1120	26 1.969E 19 2.412E	

2, 44

2.43

1206.00 1196

1292.07 1287

18 7.072F 00

11 3.999E-01 14.1

914.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:36:49 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\* \*\*\*\*\*

91119065 QY KF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0320B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1,0541, 00 UNITS: UG

🌎 SAMPILE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAUS

ACQUISITION DATE: 21DEC79 5:53 \* FWHM(1332)2, 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 888 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENFRGY TOLERANCE: 2. 000KV KEVZCHNL: 0. 5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMI1: 85. 88%

ELEMENT	PEAK ENERGY	BKGNE	) F	IREA	CONCEN		SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	564. 2	5520	). 153	964.	Ø. 681	.5	0. 0021	1. 3 Ø. 3 ECTABLE
1115: 29: 1124: 176: 1137: 185:	7. 51.88.	388. 12876. 140.	22238.	502. 29464. 89.	30962.	26083.		871. 7019. 92.
1115: 29 1128: 176 1133: 185	7. 5188.	388. 12876. 140.	463. 22238. 102.	502. 29464. 89.	. 30962.	26083.		
1301: 5 1310: 3 1319: 4	5. 37.	47.	51 46.	58 32	. 55. . 41	43. 35.	46. 34.	33.
PK IT ENE.							1. 000 ( CTS/:	SEC ZERR
1 1 511 2 1 564 3 1 602 4 1 646	. 19     1539 . 81         45	164. 5 120. s	5520. L044.	2. 31. 2. 35	1022. 51 1128. 70 1205. 88 1292. 69	1120 1	27 2. 0621 1.9 2. 5661 1.8 7. 5341 1.5 5. 4591	7 02 0.3 5 00 1.8

SAMPLF DATE: 20DEC79 1021:00

SAMPLE IDENTIFICATION: 03200

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9273.000

SAMPLE GEOMETRY: .25 IN

EFF1CIENCY FILE NAME: FFF. TAB1

:A:

UNITS:

UG

ACQUISITION DATE: 21DEC79 16:27 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
PELAPSUD REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC: \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ELEMENT		PEAK JERGY	BKGNI	) A	REA	CONCEN		_ SIGMA ERROR	%ERROR
%-COPPER %-ANTIMO %-ARSENI	INY 5	564. 2	4047	<sup>7</sup> . 122	118.	9. 615	i6		1. 4 Ø. 3 ECTABLE
1124:	1374.	4192.	100XX.	17735.	23080.	24449.	20824.	501. 13066. 54.	5606.
1124:	1374.	4192.	10033.	17735.	23080.	24449.	20824.	501. 13066. 54.	5606.
<b>1310</b> :	37. 35.	33. 27.	33. 34.	41. 34.	34. 31.	46. 43. 31. CORRECT	34 23.	36. 20.	38. 37. 39.
PK IT								· CTS/:	SEC XERR
2 1 3 1	511. 07 564. 19 602. 86 645. 70	1221:	91. : 1.8. 4 54. 36.	4047. 780.	2. 34 : 2. 34 :		1119 1 1195 3	23 1. 7151 L9 2. 0351 20 5. 9411 L9 5. 5931	: 02 0.3 : 00 2.0

\*\*\*\* 21 DEC 1979 3:39:12 PM \*\*\*\*\*\* 

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0321A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9532, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 21DEC79 26:57 \* FWHM(1332) 2.390 PRESET TIME(L)VE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

657. 22

21.4.

1

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER X-ANTIMONY %-ARSENIC	564. 2	1102. :	1.2581.1.	0.6182	0. 0008 0. 0020 0. 0011	0.3
1115: 270 1124: 1430 1133: 1430		0365. 184;		25113. 21	523. 519. 248. 13281. 68. 66.	
1124: 1430		L0365. 184;	21. 24021.	25113. 21		
● 1310: 30 1319: 3	5. 30. 5. 33.	41. :	51. 57. 28. 30.	75. 32.	29. 29. 55. 47. 23. 29. I = 1.000	31. 42. 28.
PK IT ENE	RGY AREA	A BKGND	РЫНМ (	CHANNEL LEF	T PW CTS/S	SEC %ERR
1 1 511 2 5 559 3 5 564 4 1 602 5 1 646	. 58 2634 . 18 12581: . 81 3620	7. 4648 4. 1822 L. 11.02 3. 756 5. 740	. 2.99 : . 2.30 : . 2.32 :	1022.56 101 1119.50 111 1128.68 111 1205.90 119 1292.32 128	.1 41 4.3890 .1 41 2.0970 5 21 6.0330	5 00 3.0 5 02 0.3

2. 51

1314.64 1307

16 3.571E-01 15.6

\$\darkappa \darkappa \dark \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 D<u>C</u>C 1979 3:40:20 PM \*\*\*\*\*\* 

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 03218

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8523.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 21DEC79 37:27 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 61.6. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY 10LERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: --0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

•	ELEMENT	• 4 •••	PEAK ENERGY	BKGND	' Ĥ	REA	CONCEN		SIGMA ERROR	%ERRO	R
-	%-COPPE %-ANTIM %-ARSEN	ION'Y	511.1 4147. 9669 564.2 807. 114075 657.3 403. 138			0. 054: 0. 628: 0. 005:	9	0. 0008 0. 0021 0. 0011	1. 0. 22.	3	
•	1115: 1124: 1133:	259. 1288. 1320.	333. 3753. 236.	374. 9352. 92.	476. 1.6519. 65.	491. 21.824. 68.	455. 22750. 65.	514. 19218. 71.	486. 12040. 65.	632. 5097. 55.	
•	1115: 1124: 1133:	259. 1288. 1320.	333. 3753. 236.	374. 9352. 92.	476. 16519. 65.	491. 21824. 68.	455. 22750. 65.	51.4. 19218. 71.	486. 12040. 65.	632. 5097. 55.	
•	1301: ' 1310: 1319:	28. 32. 29. PU	28. 27. 25. LSE-P1LE	29. 30. 28. UP COR	22. 44. 32. RECTED	39. 50. 23. DATA.	26. 53. 30. CORRECT	24. 33. 31. 10N =	31. 40. 16. 1. 000	28. 31. 26.	
•	PK IT	ENERG						 LEFT PW		SEC XE	E.E

	PK	IT	ENERGY	FIREA	BKGND	FWHM	CHANNEL LEF	r PW	CTS/SEC	ZERR
)	1	1.	511. 07	9669.	4147.	3. 99	1022, 55 101	? 26	1.612E 01	1. 4
	2	5	559. 62	2456.	1452.	3. 02	1119.58 110		4. 094E. 00	3.0
	3	5	564. 18	114075.	807.	2. 30	1128.69 110	9 30	1. 901E 02	Ø. 3
•	4	1.	602.86	3345.	822.	2. 29	1.205, 99 119	5 23	5. 576E 00	2. 1
	5	:1.	646. 00	228.	400.	2.86	1292. 20 128	5 13	3. 794E-01.	14. 1
	5	1.	657. 32	138.	403.	2. 89	1314.83 130	3 14	2. 292E-01	22. 3

\*\*\*\*\* 21. DEC 1979 3:41:25 PM \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q321C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10394.00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1.

:к

ACQUISITION DATE: 21DEC79 47:57 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER 1TERATIONS: 10.

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8.99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT:

85. 00%

## UNKNOWN SAMPLE REPORT

657.07

170.

751..

ELEMEN	T	PEAK ENERG'	т' ВК0	GND	AREA	CONCE		SIGMA ERROR	%ERROR
%-COPP %-ANTI	MONY	511. I 564. :	2	911. 13	.2134. :5979.	0. 615	<b>5</b> 2 1	0. 0007 0. 0019	1. 3 0. 3
X-ARSE	MIC	657. :	i.	751.	170.	0.005	51.	9. 0012	24. 0
1115:	268	. 37:	5. 470	a. 552	. 644	. 61.9.	580.	559.	725.
1124 :	1568	. 457	5. 1112	5. <b>1</b> 9848				14337.	6038.
113%:	1696	. 32	7. 10%	2. 99	0. 104	. 93.	83.	79.	68.
1115:	268	. 37:	5. 476	a. 552	). 644	. 619.	580.	559.	725.
1124:	1568	. 4573	5. 11125	5. 19848	). 25708			14337.	6038.
<b>11</b> 3%:	1696	. 32	7. 1.02	2. 99	). 104	. 93.	83.	70.	68.
1301:	31.	. B	5. <u>3</u> 6	5. 2S	). 33	. 34.	37.	42.	24.
1310:	34	. 3:	9. 50	3. 64	l. 73		55.	53.	34.
1310:	41	. 34	4. 3:	2. 33	: 21	. 28.		35.	43.
	P	ULSE-P	ILE-UP (	CORRECTE	D DATA.	CORRECT		1.000	
PK IT	ENER	GY I	AREA	BKGND	FWHM	CHANNEL	LEFT PW	CTS/	FEC ZERR
1 1	511.	Ø4 1.:	2134.	4043.	3. 07	1.022, 49	1012 2	1 2 0221	E 01 1.2
2 4	559.	56	3267.	1529.		1119.45		6 5. 4451	
_ 3 4	564.	18 13	5979.	911.		1128. 69	1.1.07 3		
4 1.	. 602.	80 :	3870.	1202.	2. 38	1205.87	1197 2	1 6. 4501	
5 1	645.	69	191.	522.	2. 02	1291. 58	1286 1	2 3. 1771	
		40° 100 g							·

2. 19

1314.33 1308

21 2.841E-01 24.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC: 1979 3:42:34 PM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DFC79 1021:00 SAMPLE IDENTIFICATION: 0322A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10854.00 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 21DEC79 58:28 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 61.9. SEC \* SHAFE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR lierations: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

1

657, 59

284.

387.

ELEMENT	r	PEAK ENERGY	BKGN	ID F	REA	CONCEN		. SIGMA ERROR	%ERROR
34402-X 11 TMA-X		511. 1 564. 2	525 98		.865. 2592.			0. 0007 0. 0019	1. 4
		657. 6	38		284.	0. 996 9. 51.c		0. 0019 0. 0010	0. 3 11. 6
1115:	290.		471.	598.	639.	623.	541.	595.	717.
1124:	1664.		11557.	21119.			2381.9.	14999.	6432.
113%:	1687.	346.	124.	97.	86.	88.	83.	79.	91
1115:	290.	392.	471.	598.	639.	623.	541.	595.	717.
1124:	1664.	4733.	1.1.557.	21119.	26862.		2381.9.	14999.	6432.
113%:	1687.	. 346.	124.	97.	86.	88.	83.	79.	91.
1301:	32.	41.	24.	33.	38.	58.	33.	31.	31.
1310:	27.			51.			68.		52.
1319:	45.	. 25.		27.				37.	40.
<b>t</b>	F	ULSE-PI	_E-UP CC	RRECTED			ION =		
PK IT	ENER	GY FII	REA E	KGND	FWHM	CHAWNEL	LEFT P	l CTSZ:	SEC %ERR
1 1	511	07 <u>1.1</u> :	365.	5258.	3. 1.0	1022. 55	1012 S	27 1. 978	E 01 1.3
2 3 3 3		47 30		1566.		1119. 28		4 5. 103	
3 3	564.	18 142	592.	989.	2. 31	11.28. 68		(1 2. 377)	
4 1		80 41	<b>312</b> .	828.	2. 35	1205.87	1198 1	.6 6. 687	
5 d.	645.	61 :	284.	564.	2. 69	1291.43	1.286 1	L4 4. 729I	E-01 13.2
.ee .ee	_100 protes pays	INC. W.							

3. 01.

1315.37 1309

13 4.728E-01 11.5

\*\*\*\*\*\*\* 21 DEC 1979 3:43:43 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q322B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9793. 000 UNITS: UG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: FFF. TAB1

108:58 \* FWHM(1332)ACQUISITION DATE: 21DEC79 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR ITERATIONS: 1.0.

2. 000KV

15 4. 293E-01 14. 4

13 3.242E-01 16.3

DETECTOR: GEL I-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.59%2283 KEV \* ABUNDANCE LIMIN: 85. 00%

### UNKNOWN SAMPLE REPORT

1

1

646. 1.3

656, 87

258.

1.95.

562.

403.

•	ELEMENT	E	PEAK ENERGY	BKGM	D F	REA	CONCE		SIGMR ERROR	ZER	ROR
	X-COPPER X-ANTIMO X-ARSEN:	YMC	511. 1 564. 2 656. 9	465 106 40	7. 134	.006.  416.  195.	0. 055 0. 647 0. 006	<sup>2</sup> 6	0. 0008 0. 0020 0. 0010		1. 4 Ø. 3 6. 3
•	1115: 1124: 1133:	242. 1531. 1613.	356. 4523. 319.	476. 11032. 120.	594. 19442. 122.		. 26961.	22612.	571. 14248. 74.	753 6017 58	•
•	1115: 1124: 1133:	242. 1531. 1613.	356. 4523. 319.	476. 11.032. 120.	594. 19442. 1.22.	589 25560 104	. 26961.	2261.2.	571. 14248. 74.	753 6017 58	
•	1301: 1310: 1319:	33. 32. 25.	36. 40. 34. SE-P11	45. 46. 26. E-UP CO	29. 74. 30.	66 31	. 49.		40. 43. 38. 1. 000	28 41 38	••
•	PK IT	ENERG			KGND		CHANNEL			SEC:	ZERR
•	1 1 2 5 3 5 4 1	511, 12 559, 60 564, 18 602, 83	a 28 3 1344	54. 16.	4656. 1819. 1067. 1248.	2. 99 2. 31	1022. 63 1119. 53 1128. 69 1205. 93	1109 3 1109 3	25	: 00 : 00	1. 3 2. 8 0. 3 2. 1

2.53

2. 52

1292.46 1286

1313.93 1309

# 91119065 QY RF FIFTH 1RRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0322C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9368.000 UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

UG

ACQUISITION DATE: 21DEC79 119:28 \* FWHM(1332) 2.398 PRESET TIME(LIVE): 699. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 61.6. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

:4:

DETECTOR: GEL1-8 \* LIBRARY:NUCL.L181

DATE CALIBRATED: 260C179 1434:06 \* FNERGY TOLERANCE: 2.00ÓKY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

5

1

646, 23

199.

817.

ELEMENT	PEAK ENERGY	BKGND	<u></u>	REA	CONCE		SIGMA ERROR	ZERROR	
₩ %-ANTIMONS	511. 1 ' 564. 2 657. 4	852	. 120	1664.	9. 698	39	0. 0 <u>02</u> 0	0.3	, ,
	235. 327. 358. 41.35. 378. 274.	9789.	502. 1.7507. 77.	22800	23859.	20422.	12854.		
	235. 327. 358. 4135. 378. 274.	9789.	502. 1.7507. 77.		. 23859.		12854.		
• 1310: 1319:		31.	54. 31.	51 22	. 51. . 20.	46. 32.	29. 36.	25. 43. 27.	
PK IT E	VERGY AF				CHFINNEL			SEC XER	:R
2 4 55 3 4 56	L1.05 10: 59.54 27 54.19 120: 32.84 3:	564.	.556. 852.	3. 17 2. 32	1.022. 51 1119. 41 1128. 70 1.205. 94	11.08 3 11.08 3	27 1.6918 30 4.6528 30 2.0118 18 5.9538	5 00 2.8 5 02 0.3	) }

2. 48

1292.67 1281 23 3.323E-01 21.5

\*\*\*\*\*\*\*\* 21 D<u>E</u>C 1979 3:45:53 PM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q261A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9290, 000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 21DEC79 129:58 \* FWHM(1332)2. 390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL., L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFF RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

5

1

645.98

800.

1936.

• ELEMENT	PEAK ENERGY	BKGWD		REA	CONCEN		. SIGMA ERROR	ZERF	₹0R
X-COPPER X-ANTIMONY X-ARSENIC	511. 0 564. 1 657. 4	10470. 3826. 1863.	406	i468. .429. Ø. <	0. 029 2. 079 0. 007	21	0.0009 0.0045 NOT DET	ij	3. Ø 9. 2 E
• 1115: 762 1124: 5086 1133: 5012	. 14730.		1382. 50900. 511.	1388 77771 497	. 80105.	66275.		2328. 1.7635. 41.3.	•
1115: 762 1124: 5086 113%: 5012	. 14730.	1080. 35227. 6 657.	1382. 50900. 511.	1.388 77771 497	. 80105.	66275.	1.625. 41.383. 422.	2328. 1.7635. 41.3.	•
• 1301: 152 1310: 128 1310: 124	. 150. . 121.	123. 142. 135. E-UP CORF	134.	116 168 119	. 165. . 120.	1.78. 119.	1.41. 123.	1.07. 136. 124.	
PK IT ENER	GY AR	EA BKO	3ND	FЫНМ	CORRECT		1. 000 I CTS/	SEC :	ZERR
1 1 511. 2 10 559. 3 10 564. 4 1 602.	70 57 14 4064	87. 20 29. 38	)65.	1. 23 2. 33	1022. 41 1119. 74 1128. 62 1205. 83	1.108 3 1.108 3	?0 9.114 \$2 9.645 \$2 6.774 L8 1.944	E 00 : E 02 (	3. 0 1. 7 0. 2 1. 2

2. 61 1292. 1.6 1.285

14 1.334E 00

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:46:57 PM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 02618

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9984, 999 UNITS: LIG

SAMPLE GEOMETRY: . 25 lN

EFFICIENCY FILE NAME: EFF. TAB1.

\*\*\*\*\*\*\*

ACQUISITION DATE: 21DEC79 141:05 \* FWHM(1332) 2.390 PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5. 000 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

1.

645, 86

722.

1960.

ELEMENT	PEAK ENERGY	BKGND	F	IREA	CONCEN		SIGMA ERROR	ZERF	ROR
Z-COPPER  Z-ANTIMONY Z-ARSENIC	564. 2	3752.	402	2821.	2. 1.04	14	0. 0046	ť	a. 2
• 1115: 79 1124: 501 1132: 474	8. 14267.		59698.	1381 76548 460		66684.	1464. 41450. 377.	17597.	
1115: 79 1124: 501 1133: 474	8. 14267.		59698.	76548	. 1431. . 79697. . 401.	66684.	41450.	1.7597.	
• 130%: 14 • 1310: 13 1319: 12	8. 147.	111.	138. 109.	1.65 11.3	. 1.75. . 1.31.	152. 130.	156. 112.	115. 140. 108.	
PK IT ENE	RGY AR	EA BK	GND	FЫНМ	CHANNEL.	LEFT P	d CTS/	SEC 2	ZERR
1 1. 511 2 6 559 3 6 564 4 1 602	.69 45 .16 4028	53. 2 21. 3	752.	1. 49 2. 33	1022. 52 1119. 72 1128. 64 1205. 90	1109 1109	L9 8.194 32 7.589 32 6.714 20 1.924	E 00 :	3. 2 2. 2 9. 2 1. 2

2. 35

1291. 92 1285

13 1.203F 00

# 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0261C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9200.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 21DEC79 152:11 \* FWHM(1.332)2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 647. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.01.

-7

DETECTOR: GEL.I-8 \* L.1BRARY: NUCL. L.1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

•

ELEMENT	**************************************	PEAK ENERGY	BKGNI	D A	REA	CONCEN		SIGMA ERROR	%ERROR
%-COPPE %-ANTIM %-ARSEN	ONY	511. Ø 564. 2 657. 5	3 <b>190</b> . 3685		645. 511. 289.	0. 026 1. 904 0. 010	6	0. 0008 0. 0043 0. 0019	3. 2 0. 2 19. 1
• 1115: 1124: 1133:	696. 4613. 4432.	859. 13336. 1096.	1.019. 31191. 526.	1176. 54389. 434.	1320. 70575. 433.	1261 74062. 365.	1403. 60969. 341.	1448. 37581. 314.	2111. 16143. 298.
1115: 1124: 1133:	696. 4613. 4432.	859. 13336. 1096.	1019. 31191. 526.	1176. 54389. 434.	1320. 70575. 433.	1261. 74062. 365.	1.403. 60969. 341.	1.448. 37581. 31.4.	2111. 161.43. 298.
• 1300: 1310: 1319:	131. 107. 118. PU	134. 96. 115. LSE-PIL	112. 121. 101. E-UF CO	1.26. 141. 93. RRECTED	95. 163. 98. DATA.	102. 166. 95. CORRECT	112. 141. 124. TON =	105. 128. 98. 1. 000	120. 107. 126.
PK IT	ENERG						LEFT PW		SEC %ERI

	PK	17	ENERGY	AREA	BKGND	FWHM	CHANNEL LEFT	PЫ	CTS/SEC	<b>XERR</b>
	1	<b>1</b> .	510. 98	4645.	8339.	3. 01	1022.38 1014	1.7	7. 742E 00	3. 1
	2	6	559. 73	4093.	2700.	1. 52	1119.79 1108		6. 822E 00	2. 4
	3	6	564. 16	368511.	3190.	2. 31	1.128. 64 1108	39	6.142E 02	0.2
	4	1.	602. 81	1.0585.	2869.	2. 34	1205.88 1198	17	1.764E 01	1 2
	5	1.	646. 00	712.	1849.	2. 35	1292.20 1285	1.5	1.186E 00	9. 3
_	6	:1.	657. 48	289.	1359.	2. 41.	1315. 15 1310	13	4. 81.1.E-01	19. 0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:49:08 PM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0347AA

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9517.000 UNITS: LIG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABS

\*

ACQUISITION DATE: 21DEC79 203:13 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

## UNKNOWN SAMPLE REPORT

1.

603.03

1.19.

132.

ELEMENT	PEAK ENERGY	BKGND	ĤR	EA	CONCENTR.		IGMA ROR	%ERRO	R
X-COPPER X-ANTIMONY X-ARSENIC	511. 1. 564. 2 657. 4	618. 200. 90.	95 37	33. 73. 0. c	0. 0523 0. 0189 0. 0016	Ø.	0006 0003 T DETE	1. 1. CTABLE	
1115: 9 1124: 4 1133: 4	8. 119.		9. 576. 6.	12. 706. 6.	19. 746. 9.	28. 61.8. 11.	17. 396. 7.	16. 1.77. 8.	
	9. 7. 8. 119. 9. 16.		9. 576. 6.	12. 706. 6.	1.9. 746. 9.	28. 618. 11.	17. 396. 7.	16. 177. 8.	
• 1310: :	4. 4. 9. 8. 4. 3. PULSE-PILE-	12. 9.	7. 6. 11. CTED	6. 11. 4. DATA. (	2. 7. 3. CORRECTION	3. 9. 12. 1 = 1	9. 6. 3. 000	0. 6. 4.	
PK IT ENE	RGY AREA	BKGM	ID F	ънм сі	HANNEL LEF	T PW	C:TS/S	e.c %e	RR
1 1 511 2 1 564					922. 53  101 1.28. 63  111		1 589E 6. 288E		

2. 39

1206.33 1199 16 1.983E-01 16.4

\*\*\*\*\* 21 DEC 1979 3:50:07 PM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*

# 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q347AB

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.0602, 00 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABI

ACQUISITION DATE: 21DEC79 213:28 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* NBR TTERATIONS: 10.

**\*** 

DETECTOR: GEL1-8 \* LIBRARY: NUCL, LIBI

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RAYIO: 8. 99

-0.5932283 KEV OFFSET: \* ABUNDANCE LIMIT: 85. 00%

## UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND 6	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC		275.	4324.	0.0195	0. 0006 0. 0003 NOT DE	1.6
• 1115: 16 1124: 57 1133: 86	<sup>7</sup> . 1.49.	392. 609.	816.	811.	16. 21. 766. 459. 4. 8.	. 213.
1115: 16 1126: 57 1133: 86	<sup>7</sup> . 140.	19. 18. 392. 609. 16. 6.	81.6.	811.	16. 21. 766. 459. 4. 8.	. 213.
● 1304: 10 1310: 5 1319: 7	5. 8. 7. 4.	7. 8. 7. 14.	3. 5.	8. 8.	7. 8. 5. 4.	. 1.0. . 1.5. . 4.
PK IT ENER	°ULSE-PILE-U RGY AREA	BKGND		CORRECTION		/SEC %ERR
1 1 511 2 1 564. 3 1 602.	19 4324.	648. 275. 135.	2.39 1	022.55 101 128.72 111 205.87 11s	.8 20 7. 20	

# 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q347AC

'SAMMLE IDENTIFICHTION: W347HU TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9162.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

:+:

ACQUISITION DATE: 21DEC79 223:42 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC. \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME :: 600. SEC \* MBR ITERATIONS: 1.0.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1.

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

## UNKMOWN SAMPLE REPORT

1.

602, 85

142.

120.

ELEMENT		ERK ERGY	BKGND	FI	REA	CONCENT		SIGMA RROR	%ERROR
%-COPPER %-ANTIMO %-ARSENI	אר אור	11. 1 54. 2 57. 4	564. 290. 96.		864. 624. 0. C	0. 0515 0. 0189 0. 0017	Ø.	0006 0003 )T DETE:	1. 2 1. 8 CTABLE
1115: 1124: 1133:	1.3. 46. 49.	18. 135. 12.	1.9. 285. 17.	15. 546. 10.	22. 679. 11.	676.	14. 660. 10.	19. 400. 7.	17. 180. 4.
1115: 1124: 1133:	13. 46. 49.	1.8. 135. 12.	19. 285. 17.	15. 546. 10.	22. 679. 11.	676.	14. 660. 10.	19. 400. 7.	17. 180. 4.
1301: 1310: 1319:	9. 8. 7. PULS	8. 8. 11. E-PILE-U	10. 3. 8. P CORRI	8. 10. 6. CTED	4. 11. 10. DATA.	3.	8. 5. 9. ON = 1.	3. 8. <b>12</b> . 000	6. 8. 8.
PK IT	ENERGY	AREA	BKG	(I)	FWHM I	CHRINNEL L	ЕГТ РЫ	CTS/S	EC %ERR
<ul><li>1 1.</li><li>2 1.</li></ul>	511 09 564. 21.	8864. 3624.					.01.1 23 120 20	1. 477E 6. 040E	

2. 62

1205.96 1198

16 2.363E-04.13.8

# 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 03478A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8951.000 UNITS: UG

SAMPLE GEOMETRY: . 25 IN

EFFICIENCY FILE NAME: EFF. TABL

\*

ACQUISITION DATE: 21DEC79 233:57 \* FWHM(4.332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS:

:4

DETECTOR: GELI-8 \* LIBRARY:NUCL.L181
DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLFRANCE:

£.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCE		SIGMA RROR :	ZERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 2	599.	3520.		88 0.	0004	2. 0
• 1115: 1124: 113%:	46. 116.	10. 290. 9.		97. 703.	635.		170.
1115: 112#: 113%:	46. 1.16.	290.			635.	18. 357. 11.	18. 170. 10.
1301: 1310: 1310:	5. 4. 9. 7.		7. 6.	4. 5. 5. 6.	. 8. . 10.	9. 5.	
PK IT EN	ERGY AR	EA BKGM	ID FWHM	CHANNEL	LEFT PW	CTS/SEC	%ERR
2 1 56		94. 46 20. 59 53. 16	<i>1</i> 9. 2.26	1128.68	1.121 47	1. 416E 0 5. 866E 0 2. 550E-0	

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: 0347BB

SHMPLE IDENTIFICHTION: Q347BE TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8889.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF. TAB1

\*

:4:

ACQUISITION DATE: 21DEC79 244:10 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 699. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

## UMKNOWN SAMPLE REPORT

2

:1\_

1

564.16

602.76

3742.

129.

ELEMENT	PEAK ENERGY	BKGND	ARI	Ξ <b>A</b>	CONCENTR		IGMA ROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC			80! 374		0. 0491 0. 0202 0. 0019		0006 0003 T DETE	1. 3 1. 7 CTABLE
• 1115: 1124: 1133:	16. 13. 58. 126. 48. 18	. 334.	13. 551. 7.	1.8. 738. 9.	12. 727. 5.	21. 643. 8.	19. 368. 11.	31 178. 8.
1115: 1124: 113%:	16. 13 58. 126 48. 18	. 334.	13. 551. 7.	1.8. 738. 9.	12. 727. 5.	21. 643. 8.	19. 368. 11.	31 178. 8.
1301: 1310: 1319:	14. 11 7. 11 11. 10 PULSE-P1	. 11.	6.	7. 5.	5. 9. 8. CORRECTIO	11.	7. 1.0. 20. 999	5. 7. 8.
	YERGY A	REA BKG	ND FI	WHM C	:ANNEL LE 322.61 10	FT FW	CYS/S	

2. 32

2. 64

1128.64 1118

1205.79 1199

20 6, 2375, 00

13 2.151.E-01 14.8

1.7

21.0.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 21 DEC 1979 3:54:10 PM \*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

#### 91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00 SAMPLE IDENTIFICATION: Q3478C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8577.000 UNITS: LIG

SAMPLE GEOMETRY: . 25 1N

EFFICIENCY FILE NAME: EFF. THEI

ACQUISITION DATE: 21DEC79 254:24 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KFV

\* ABUNDANCE LIMIT: 85. 00%

ELEMENT	PEAK E'NERGY	BKGND	AREH	CONCENT	1. SIC R. ERRO		₹
%-COPPER %-ANTIMONY %-ARSENIC			7640. 31.21. 0.	0. 0175	0. 00	006 1.3 003 1.9 DETECTABLE	
1124:	19. 8. 11. 115. 19. 12.	268.	12. ; 468. 6. 7.	1.5. 20. 35. 612. 4. 8.		23. 14. 333. 159. 12. 13.	
<u> </u>	19. 8. 11. 115. 19. 12.	268.	12. 5 468. 6 7.		506.	23. 14. 333. 159. 12. 13.	
• 1301: 1310: 1310:	7. 9.	9. 3.	1.1. 8.	14. 4. 3. 7. 7. 7. A. CORRECTIO	3. 5.	6. 10. 6. 4.	
PK IT EN	ERGY ÁRE					CTS/SEC: %EI	RR
2 1. 564	L. 03 764 4. 15 312 2. 73 15	1. 2E	i9. 2.32	1128.63 1:	118 22 5.	.273E 01 1.: .202E 00 1.: .634E-01 15.:	9

Return	91.119065 QY RF	FIFTH 1RRADJAT:	IN 5 to irradiation
	H 1 , m, m, pro, po, pompo.	_	Part III
SAMPLIS- SAM. WT.	%-COPPER	X-FINT PIONY	%-ARSENİC
● 0222A 🧠 10256.000		0. 80828 ·¬s4	9. 18892 . <sub>184</sub>
02228 \ 12375.000		0.81384	Ø. 196Ø9
92220 1.0287.000		0.80860	0. 19732
● Q222D \ 8484.000 Q222E \ 7246.000		1. 08848	0. 26243
		1. 23398 0. 84437	9. 30204 9. 40844
● 0222G 10\$68.000		0. 04437 0. 78211	0. 19014 0. 19068
Q222H 80 <b>ର</b> ୨. ଉପଡ		5. 42477	1. 26722
0222I	0. 01.222	1 07299	0. 26000
<b>●</b> 0222J 5933 <b>\</b> 000		1. 1.31.78	0. 27536
9222K 7218. 999		2. 38258	0. 581.94
02221. 8711. 000 ●0222M 9700. 000		0. 80862	0. 19639
Q222N 9779.000		0. 83578 0. 84183	0. 19573 0. 19306
_ 02220 9124.000	•	e. 04103 1 95002	0 49054
● 0.222P 8006.000	<b>*</b>	9. 83680	0. 19374 <b>O</b>
Q222Q 8321.000	0.01430	1.03555	0. 24062
Q222R 8045. 000		1. 22264	ø. 29376 🗼
● 0222S 8163.000		0. 79332	0. 19112
9222T <del>-</del> 8652. 999	ı <b>– \</b> 0. 01663	Ø. 72589	0. 17270
•	0.01354 AVG	1.27211 AVG	0.30344 AVG
•	8. <b>9</b> 82362 SD	1. 27211 GVG 1. 062786 SD	0.30344 HVG 0.249719 SD
_	21.8 <b>8</b> 0741 %RSD	83. 544899 %RSD	82. 295235 %RSD _
			•
02238- 9945.000		1. 08896	0. 26040
● Q223B 6360. 000 Q223C 6922. 000		0. 81.869	Ø. 1.9865
	NIII C	8. 88765 1.37435	0. 18720 .34574
● Q223E 6348. 00@		5. 601.54	1.35076
0223F 7145.000	<b>M</b>	a. 7906a	0. 18404
<b>_</b> 0223G		0. 79291	0. 19375 <b></b>
<b>●</b> 0223H 7719.000		0. 72912	0. 16375
Q223I 6110.000 Q223J 7710.000		0. 82492	0. 19213
0223J 7710.000 ●0223K 5883.000		<b>№</b> 78235	Ø. 18645
0223L 56120.000		<b>\</b> 5. 92930 0. 76994	1. 44188 0. 18769
_ Q223M 5611.000		8. 79116	0. 10105 0. 19174
●0223N 6722.000		2 1.4784	0. 52931 • I
Q223O 6078.000		Ø. <b>₹</b> 5446	0. 18250
0223P 8155.000		0. <b>94</b> 976	0. 23633
♥02230 5228.000 0223R 6434.000		0.83√533 0.03*4≡	0. 19362 0. 40306
Q223R 6434. 000 _ Q223S 5488. 000		0.83 <b>%</b> 45 0.864 <b>%</b> 9	0. 19726 0. 21768
•2237 5464. 000		0.00477 0.85107	9. 21758 9. 19400
			The Till I was well in Touch Type T
	0.01.296 AVG	1. 3851.8 <b>\</b> ave	0.33329 AVG 🙇
	0.002867 SD	1.529667 <b>T</b> D	0.371916 SD
	22.128092 %RSD	110.430763 % SD	111.590317 %RSD
•			•
Q224A 4863. 000	1 < 0.00890	5. 30724	1. 35133
_ 0224B 8218.000	0. 01254	Ø. 94577	0. 24043 
<b>●</b> 0224C 8397.000		1 98304	0. 49172
0224D 7322.000		0. 80568	0. 17797
0224E 7770, 000 ● 0224F 8343, 000		0. 75722 0. 97507	<b>\</b> 0. 18878 √0. 22804
0224G 7065.000		e. arber 8. 82359	0. 22884 0. 1.9006
_ Q224H 8409.000		0. 02.303 0. 92981	0\23884 
<b>●</b> 02241 6837.000		0. 7230. 0. 78326	0. 19105
0224J 8286 NOF		<u>0 77898</u>	<u>0 18798</u>

	•	S604E ● S604F S604G	•	● 5626F 5626G	•	0224K 0224L 0224M^* 0224N 0224P 0224P 0224R 0224R 0224S 0224T
		7303. 000		9345. 000 11253. 000		6541. 000 6272. 000 6018. 000 7364. 000
		< < <				< <
	0.00000 AVG 0.000000 SD 0.000000 XRSD	0. 00565 0. 00659 0. 00703	0.07800 AVG 0.000050 SD 0.063759 %RSD	0. 07804 0. 07797	0.01292 AVG 0.002549 SD 19.725803 %RSD	0. 01130 0. 01288 0. 01274 0. 01053 0. 00862 0. 01352 0. 00898 0. 01270 0. 01431
	1.99200 AVG 0.023157 SD 1.162480 %RSD	1. 96538 2. 00747 2. 00316	0.71921 AVG 0.013530 SD 1.881175 %RSD	0. 70964	1.79956 AVG 1.733179 SD 96.311417 %RSD	1. 24648 0. 80008 0. 96 0. 93832 5. 25424 1. 01403 5. 06981 0. 75881 0. 94416 4. 90900
	0.10039 AVG 0.004191 SD 4.174226 %RSD	0. 09555 0. 10282 0. 10280	0.00000 AVG 0.000000 SD 0.000000 %RSD	0. 00644 0. 00559	0.43996 AVG 0.431355 SD 98.045197 %RSD	0. 28910 0. 19108 0. 22338 0. 24565 1. 26914 0. 23928 1. 23217 0. 19049 0. 22041 1. 22503
• • • • • •	•	•	•	• .	•	•

91119065	QY,RF FJF	=TH	1RRAD	IATION PART TWO		5th irradiation partII
SAMPLE	SAM.	MT (		%-COPPER	X-FOIMONY	%-ARSENIC Rerum
• 0222A 0222B 0222C • 0222E 0222F 0222F 0222H 0222H 0222H 0222K 0222K 0222K 0222C 0222C 0222C 0222C 0222C 0222C	10256. 12375. 10287. 8484. 7246. 8903. 10368. 8009. 8515. 5933. 7218. 8711. 9700. 9779. 9124. 8006. 8321. 8045.	999 999 999 999 999 999 999 999 999 99	<	0.01219 0.01140 0.01290 0.01097 0.01528 0.01199 0.01162 0.00672 0.01354 0.01354 0.01254 0.01289 0.01190 0.01363 0.01289 0.01680 0.01670 0.01670	0.73380 0.68294 0.74318 0.88152 1.05429 0.71166 0.67707 4.83814 0.92341 0.71002 2.09097 0.73773 0.76374 0.71577 1.84256 0.73458 0.92867 1.01699 0.71149 0.62954	0. 18409 0. 18536 0. 19449 0. 25115 0. 29040 0. 17955 0. 18653 1. 25250 0. 24024 0. 18528 0. 56638 0. 19728 0. 19429 0. 18822 0. 50153 0. 20202 0. 24576 0. 27496 0. 18325 0. 16913
•				0.01289 AVG 0.002337 SD 18.138187 %RSD	1.10640 AVG 0.958025 SD 86.589149 %RS	0.29362 AVG 0.249258 SD SD 84.891121 %RSD
Q223A ● Q223B Q223C Q223B ● Q223F Q223G ● Q223H Q223I Q223J ● Q223K	9945. 6360. 6922. 7372. 6348. 7145. 5566. 7719. 6110. 7710.	. 000 . 000 . 000 . 000 . 000 . 000 . 000	<	0.01.352 0.00979 0.01106 0.01252 0.00842 0.01031 0.01197 0.01425 0.01547 0.01378 0.00959	0.99243 0.73941 0.69647 1.12415 4.73151 0.67147 0.67792 0.61100 1.36434 0.64780 5.22146	0. 25924 0. 19741 0. 18773 0. 29577 1. 28460 0. 18301 0. 18738 0. 16409 0. 34890 0. 17647 1. 36820
•				0. 01252 AVG 0. 002608 SD 20. 834007 %RSD	1.58890 AVG 1.694853 SD 106.668091 %RS	0.42298 AVG 0.450713 SD 5D 1.06.556419 %RSD
Q223L	6120	. 000	<	0. 00060	C 0. 00024	< 0.00168
● 0223M 0223N 02230 ● 0223P 02230 0223R ● 0223S 0223T	5611 6722 6078 8155 5228 6434 5488 6464	. 000 . 000 . 000 . 000 . 000	i i i i	0. 01345 0. 01.772 0. 00961 0. 01219 0. 01320 0. 01424 0. 01136 0. 01203	0. 67018 1. 83282 0. 74022 0. 83573 0. 72062 0. 77473 0. 77152 0. 70578	0. 17887 0. 49636 0. 18692 0. 22116 0. 19530 0. 21341 0. 20834 0. 18767
•				0.01297 AVG 0.002387 SD 18.393616 %RSD	0.88145 AVG 0.387661 SD 43.979923 %R:	0.23600 AVG 0.106200 SD 5D 44.999252 %RSD
0224A ● 0224B 0224C	4863 8218 <u>83</u> 97	. 000	)	0. 01146 0. 01479 0. 01627	5. 41866 0. 99204 1. 83595	1. 47710 0. 25531.

0224D 0224E 0224F 0224G 0224H 0224J 0224J 0224K 0224K 0224N 0224N 0224N 0224P 0224P 0224R 0224S 0224F	7322. 000 7770. 000 8343. 00 8409. 000 6837. 000 8286. 000 8086. 000 7003. 000 6525. 000 6527. 000 6541. 000 6272. 000 6018. 000 7364. 000	0.01333 0.01235 0.01458 0.01478 0.01344 0.01298 0.01257 0.01193 0.01122 0.00951 0.01259 0.01045 0.01054 0.01108 0.01236	0.68108 0.70418 0.70418 0.75679 0.85113 0.74025 0.75442 1.17611 0.72659 0.91911 0.89216 4.83926 4.83926 0.90982 4.75455 0.72672 0.81902 5.00049	0. 18733 0. 18209 0. 21860 0. 19073 0. 23326 0. 19312 0. 20276 0. 31202 0. 20017 0. 23992 0. 24243 1. 29577 0. 24220 1. 30459 0. 19149 0. 20691 1. 33024
•	·	0.01320 AVG 0.002299 SD 17.423128 %RSD	1.71550 AVG 1.709132 SD 99.628937 %RSD	0.46006 AVG 0.463779 SD 100.809113 %RSD
S626D S626E S626F	11377. 000 9345. 000 11253. 000	0. 07989 0. 07638 0. 07729	0. 75312	0. 00483 0. 00487 0. 00486
•		0.07785 AVG 0.001823 SD 2.340991 %RSD	0.72187 AVG 0.036878 SD 5.108644 %RSD	0.00487 AVG 0.000000 SD 0.000000 XRSD
S604D S604E ● S604F	10231.000	0. 00497 0. 00569 0. 00606	1. 85427 1. 77036 1. 88973	0. 09811 0. 09851 0. 10453
•		0.00000 AVG 0.000000 SD 0.000000 XRSD	1.83812 AVG 0.061303 SD 3.335106 %RSD	0.10038 AVG 0.003596 SD •• 3.582222 XRSD
S626J S626K ● S626L	8982. 000 7574. 000 9076. 000	0. 07034 0. 07594 0. 07500	0. 71794	
•		0.07376 AVG 0.003002 SD 4.069747 %RSD	0.71804 AVG 0.009959 SD 1.386928 %RSD	0.00000 AVG 0.000000 SD 0.000000 XRSD
•				•
•				•

(TI)TITLE:

91119065 QY, RF FIFT IRRADIATION PART TWO

(LM)LIBRARY:

(SA)SAMPLE 11ME: 10JAN80 1146:00 (SE)STD ENFRGY 10LERANCE: 2.00 (UE)UNK FNERGY 10LERANCE: 2.00 (TF)THERMAL FLUX: 0.0000E-01 (EF)EPITHERMAL FLUX: 0.0000E-01

(FF)FAST HLUX: 0.0000F-01

(QU)UNITS: UG

ELEMENT ENERGY HALF-LIFE SEC 1 %-COPPER 511.00 1.2800E 01 H 4.6080E 04 2 %-ANTIMONY 564.09 2.7200E 00 D 2.3501E 05 3 %-ARSFNIC 657.41 2.6300E 01 H 9.4680E 04

### STANDARD SAMPLES

MHME FILE MASS POWER ACT TIME 1 5626D 11377.00 FB11. . A01 199. 9 199999. 9 2 S626E 9345.00 FB11 .A02 100.0 100000.0 S626F 11253.00 FB14. . H03 100.0 100000.0 S604D 10231.00 FB11 . H04 100.0 100000.0 12. 5604E 7303.00 FB]1 . A05 100.0 100000.0 S604F 6894.00 FB11 .A06 100.0 100000.0

ELEMENT ENERGY CONC ERROR

1 %-COPPER 511.00 7.8000E-02 0.0000E-01

2 %-ANTIMONY 564.09 7.2000E-01 0.0000E-01

3 %-ARSENIC 657.41 0.0000E-01 0.0000E-01

STD: 2 S626E FILE= FBI1 .A02

ELEMENT ENERGY CONC ERROR

1 %-COPPER 511.00 7.8000E-02 0.0000E-01.
2 %-ANTIMONY 564.09 7.2000F-01 0.0000E-01.
3 %-ARSENIC 657.41.0.0000E-01 0.0000E-01.

STD: 3 5626F F1LE= FBI1 . A03

FLEMENT EMERGY CONC FRROR
1. %-COPPER 511.00 7.8000E-020.0000E-01.
1. 2 %-ANTIMONY 564.09 7.2000F-01.0.0000E-01.
2 %-ARSENIC 657.41 0.0000E-01.0.0000E-01

STD: 4 S604D FILE= FB11 . A04

■ ELEMENT ENERGY CONC ERROR
1 %-COPPER 511.00 0.0000E-01 0.0000E-01
2 %-ANTIMONY 564.09 0.0000E-01 0.0000E-01
■ 3 %-ARSENIC 657.41 1.0000E-01 0.0000E-01

● STD: 5 S604E F1LE= FB11 .A05

ELEMENT	ENERGY CONC ERROR	
• 1 %-COPPER	511.00 0.000E-01 0.0000E-01	•
2 X-ANTIMONY	564 <b>4</b> 0.0000E-01 0.0000E-01 <b>1</b>	
3 %-ARSFNIC	657. 41 1.0000E-01 0.0000E-01	
•		•
STD: 6 S604F	FILE= FBI1 .A06	
□ 10. 0 1004F	FILE- FEIL . NEO	•
ELEMENT	ENERGY CONC ERROR	
1 %-COPPER	511.00 0.0000E-01 0.0000E-0 <u>1</u>	
2 %-ANTIMONY	564.09 0.0000E-01 0.0000E-01	•
3 %-ARSENIC	657.41 1.0000E-01 0.0000E-01	
		•
	UNKNOWN SAMPLES	
_		-
MEME	MASS FILE POWER ACT TIME	•
1 0222A	10256.00 FB]1 .A07 100.0 100000.0	
2 0222B 9 3 0222C	12375.00 FB11 .A08 100.0 100009.0 10287.00 FB11 .A09 100.0 100000.0	<u>*</u>
4 0222D	10287.00 FBI1 .A09 100.0 100000.0 8484.00 FBI1 .A10 100.0 100000.0	•
5 Q222 <del>E</del>	7246.00 FBI1 . A11 100.0 100000.0	
• 6 ü222F	8903.00 FB11 . A12 100.0 100000.0	•
7 0222G	10%68.00 FB11 .A13 100.0 100000.0	·
8 0355H	8009.00 FB]1 .A14 100.0 100000.0	<u></u>
9 02221	8515.00 FBI1 . A15 100.0 100000.0	
10 0222J 11 0222K	5933 00 FB11 . A16	
11 0222K 12 0222L	7218.00 FBI1 .A17 100.0 100000.0 8711.00 FBI1 .A18 100.0 100000.0	<b>a</b>
13 0222M	9700.00 FB11 . A19 100.0 100000.0	•
14 0222N	9779.00 FB11 . A20 100.0 100000.0	
15 02220	9124.00 FB11 . A21 100.0 100000.0	•
16 Q222F	8006.00 FB11 .A22 100.0 100000.0	
17 02220	8321.00 FB11 .A23 100.0 100000.0	
● 18 0222R 19 0222S	8045.00 FBI1 .A24 100.0 100000.0	
19 02225 20 02221	8163.00 FB11 .A25	
● 21 0223H	8652.00 FB11 .A26 100.0 100000.0 9945.00 FBI1 .A27 100.0 100000.0	-
22 02238	6360.00 FBI1 . A28 100.0 100000.0	<del></del>
2% 0223C	6922.00 FB11 . A29 100.0 100000.0	
• 24 Q223D	7372.00 FB11 .A30 100.0 100000.0	
25	6348.00 FBI1 .A31 100.0 100000.0	
26 0223F	7145.00 FBJ1 . A32 100.0 100000.0	_
● 27 0223G 28 0223H	5566.00 FBI1 .A33 100.0 100000.0	<del></del>
28 Q223H 29 Q223I	7719.00 FB11 .A34 100.0 100000.0 6110.00 FB11 .A35 100.0 100000.0	:
• 30 Q223j	7710.00 FBI1 . A36 100.0 100000.0	•
31 Q223K	5883.00 FB11 .A37 100.0 100000.0	<del></del>
32 0223L	6120.00 FB11 .A38 100.0 100000.0	
• 3% Q223M	5611.00 FB11 A39 100.0 100000.0	•
34	6722.00 FBI1 . A40 100.0 100000.0	
35 02230 • 36 0223P	6078.00 FB11 .A41 100.0 100000.0 8155.00 FB11 .A42 100.0 100000.0	_
30 0223F 37 02230	8155.00 FBl1 .A42 100.0 100000.0 5228.00 FBl1 .A43 100.0 100000.0	•
38 Q223R	6434.00 FB11 . A44 100.0 100000.0	
<b>9</b> 39 02235	5488.00 FBI1 . A45 100.0 100000.0	•
40 Q223T	6464.00 FBI1 .A46 100.0 100000.0 ·	
41 0224A	4863.00 FBI1 . A47 100.0 100000.0	_
42 0224B 42 0224C	8218.00 FBI1 .A48 100.0 100000.0	•
43 0224C 44 0224D	8397.00 FB11 .A49 100.0 100000.0 7322.00 FB11 .A50 100.0 100000.0	
• 45 0224E	7322.00 FB11 . A51	
46 0224F	8343.00 FRI1 .A52 100.0 100000.0	•
_ 47 Q224G	7065.00 FB11 .A53 100.0 100000.0	
48 Q224H	8409.00 FBI1 .A54 100.0 100000.0	•
49 02241	6837.00 FR11 . A55 100.0 100000.0	

_	50	0224J	8286.	99	FB11		A56	 100.	Ø	100000.	Ø
9 5	51	Q224K	8086.	99	FB11		H57	1.00.	Ø	100000.	0
E *	52	0224L	<b>1</b> 93.	ØØ	FBI1		A58	100.	6	M 99999.	Ø
	53	Q224M	6525.	ØØ	FBI1		H59	1.00.	1	100000.	0
	54	0224N	7827.	ម្រា	FB11.		A60	100.		100000.	
£	55	02240	6910.	99	FBI1		H61	100.		100000	
	56	0224P	6541.	Sig	FB11		H62	100.	0	100000.	Ø
	57	02240	6272.	면단	FBI1		A63	100.		100000.	
5	58	0224R	6018.	ØØ	FBI1		H64	100.		100000.	Ø
5	59	02245	7364.	ØØ	FB11		A65	100.		100000.	Ē
- 🏶 (	60	Q224T	5340.	99	FBI1		H66	1.00.		100000.	
f	51	S626D	11377.	00	FB11		A01	100.		100000.	Ē
(	62	5626H	9345.	99	FBI1		HØ2	100.		100000.	
	63	S626F	11253.	99	FB11		HØB	1.00.		100000.	Ø
(	64	S604D	1.0231.		FB11		HØ4	100.	ĒI	100000.	Ē
	65	S604E	7303.		FB11		HØ5	100.		100000.	Ē
	66	S604F	6894.	છાછ	FB11.		A06	100.		1.000000.	
	67	5626J	9982.		FB11		H67	100.		100000.	
i	68	S626K	7574.	88	FB11		H68	100.		100000.	
• i	69	S626L	9076.				H69	100.		100000.	
						•					

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\*\*\*\*\* 14 JAN 1980 8:52:20 AM \*\*\*\*\*\* \* 91119065 QY, RF FIFTH IRRADIATION PART TWO SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 11377.00 UNITS: UĞ SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: FFF. THEM

ACQUISITION DATE: 11JAN80 2030:49 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR TTERATIONS: 10.

of 11 on 10 to 1 to 1 to 1 than 1 to 1 than 1

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CHLIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ENERGY WINDOW 499, 787 10 674, 920

PK IT ENERGY HREH BKGND FIMHM CHAMNEL LEFT PW CTS/SEC MERR FIT : 1. 510.85 7390. 4631. 2. 77 1022.11.1012 21 1. 232E 01 1.7 1.94E 00 2 2 560.27 1643. 1442. 2.12 1120.87 1108 31. 2. 739E 00 4. 1 7. 95E 01 3  $\gtrsim$ 563.99 160738. 1957. 1.84 1128.32 1108 31 2.679E 02 0.3 602.65 1 9159. 1.84 1205.58 1196 1109. 17 1. 527E 01 1.2 5.07E 00 5 645.83 652. 837. 1.91 1291.86 1286 17 1.086E 00 7.4 1.69E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT EMERGY AREA CONCENTR. ERROR CONSTANT ERROR (1. SIGMA) (1 SIGMA) **%-COPPER** 511.0 7390. 7.8000E-02 0.0000E-01 8.2109E-02 1.4337E-03 X-ANTIMONY 564.1 160738. 7.2000E-01 0.0000E-01 4.6343E-02 1.1635E-04 %-ARSENIC 657.4 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\*\*\*\* 14 JAN 1980 8:53:29 AM \*\*\*\*\*\* \*\*\*\*\* **\***\* FIFTH IRRADIATION PART TWO 91119065 QY, RF SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626E TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 9345, 000 UNITS: LIG AFFRI 55 INCOR SAMPLE GEOMETRY: EFFICIENCY FILE NAME: EFF. TAB1 

ACQUISITION DATE: 11JAN80 2041:23 \* FWHM(1332) 2.390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5. 888 ELAPSED REAL TIME: 61.8. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

:4:

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.593228% KEV \* ABUNDANCE LIMIT: 85. 00%

ENERGY WINDOW 499, 787, 70 674. 920

PK IT EMERGY HREH BKGND FWHM CHAMNEL, LEFT PW CTS/SEC **ZERR** FIT 1 1. 510,84 5748. 4272. 2.76 1022.09 1011 24 9.581E 00 2.1 1.64E 00 2 1 564.01 4169. 1.27964. 1.83 1128.34 1120 17 2.133E 02 0.3 1.04E 02 3 1. 602, 66 7403. 998. 1.85 1205.60 1194 22 1.234E 01 1. 3 4. 63E 4 1 645.86 522. 1.74 458. 1291.92 1286 14 7.640E-01 8.5 1.36E 00 5 657. 23 96. 333. 2.02 1314.65 1311 10 1.597E-01 28.8 1.93E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY AREA CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.0 5748. 7.8000E-02 0.0000E-01 7.8497E-02 1.6325E-03 Y-ANTIMONY 564. 1. 7.2000E-01.0.0000E-01.4.4999E-02.1.2983E-04 127964. W-ARSENIC 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 657. 4 Θ.

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626F TYPE OF SAMPLE: STANDARD

COMECE CONSTRAIL. JAMES CO.

SAMPLE QUANTITY: 11253.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF.TAB1

\*

:+:

ACQUISITION DATE: 11JAN80 2051:54 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC SENSITIVITY: 5.000 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 19.

:+:

:+:

:4:

DFTECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIM17: 85.00%

\*

EMERGY WINDOW 499.787 70 674.920

PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC ZERR FIT 1 1 510.85 6939. 5207. 2.89 1.022. 11 1011 26 1.156E 01 1.9 1.81E 00 2 2 560.07 1392. 1433. 2.11 1120.48 1109 45 2.319E 00 01 4. 7 5. 20E 564.00 3 2 143267. 1082. 4. 83 1128.33 1109 45 2.388F 02 **3**.3 :1 602, 68 8667. 1326. 1.84 1205.62 1194 24 1.444E 01 1.2 5.66E 00 1 645.79 623. 688. 2.05 1291.78 1284 16 1.039E 00 7.2 2.09E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELFMENT ENERGY AREA CONCENTR. ERROR CONSTANT ERROR (1. SIGMA) (1 SIGMA) %-COPPER 511. 0 6939. 7.8000E-02 0.0000E-01.7.9441E-02 1.5081E-03 Z-AWTIMONY 564. 1 143267. 7.2000E-01 0.0000E-01 4.1917E-02 1.1158E-04 X-ARSENIC 657.4 Ũ. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\* 14 JAN 1980 8:55:38 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\* 91119065 QY, RF FIFTH IRRADIATION PART TWO SAMPLE DATE: 10JHN80 1146:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 10231. 00 UNITS: UG SAMPLE GEOMETRY: AFFRI 5S INCOR

EFF. TAB1 EFFICIENCY FILE NAME: 

ACQUISITION DATE: 11JAN80 2102:28 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): SEC 5.000 600. \* SENSITIVITY: ELAPSED REAL TIME: SEC 652. \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC MBR ITERATIONS: :4: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV :4: ABUNDANCE LIMIT: 85. 00%

\*

ENERGY WINDOW 674. 920 499, 787 10

PK IT ENERGY AREA BKGND **XERR** FIMHM CHANNEL LEFT PW CTS/SEC FIT 1 2 559.08 24276. 3836. 2.14 1118, 49 1107 35 4.046E 01 9.7 1.08E 92 2 2 563, 97 35 5.898F 02 353887. 3027. 1.87 1128, 27 1107 0.2 3 1 602, 64 20757. 4085. 4.85 1205.54 11.95 19 3.459E 01 0.86.98E 🗫 4 645, 70 1432. 2258. 2. 11. 1291.61 1285 15 2.387F 1 88 5.4 1.89E 00 S 656.98 1. 2094. 1855. 1.89 1314.14 1308 14 3.490E 99 3.66.53E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT ENERGY AREA CONCENTR. FRROR COMSTANT ERROR (1 SIGMA) (1 SIGMA) %-COPPER 511.0 Ø. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 X-ANTIMONY 564. 1 Ø. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 %-ARSENIC 657.4 2094. 1.0000E-01 0.0000E-01 8.2163E-03 2.9895E-04

\*\*\*\*\*\*\*\* 14 JAN 1980 8:56:38 AM \*\*\*\*\*\*\* \* \*\*\*\*\*\*\*\*\*\*\* 91119065 QY, RF FIFTH IRRADIATION PART TWO SAMPLE DATE: 10JHN80 1146:00 SAMPLE IDENTIFICATION: TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 7303.000 UNITS: UG SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TABL 

ACQUISITION DATE: 11JAN80 2113:34 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 635. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

· :4:

:4:

DFTECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

ENERGY WINDOW 499, 787 TO 674, 920

PK IT ENERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/SEC MERR FIT 1 2 559.08 16697. 2618. 2.07 1118.49 1108 34 2.783E 01 0.9 9.13E 01 2 2 503.99 240710. 1908. 1.85 1128.31 1108 34 4.012E 02 0.2 3 1 602.66 14790. 1.. 91 1971. 1205.58 1195 18 2.465E 01 0.9 9.59E 4 1 645.87 973. 1454. 1.89 1291.94 1285 17 1.621E 00 6. 4 1. 21E 00 i:i 1 657.00 1493. 1232. 1.88 1314.19 1307 16 2.489E 00 4. 2 1, 35E Q0

PEAK SEARCH COMPLETED

# STANDARD REPORT:

**B** ELEMENT ENERGY HREA CONCENTR. ERROR CONSTANT ERROR (1. SIGMA) (1 SIGMA) %-COPPER 51.1. 0 0. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000E-01 %-ANTIMONY 564. 1 뎐. 0.000E-01.0.0000E-01.0.0000E-01.0.0000E-01. **%-ARSENIC** 657.4 1493. 1.0000E-01 0.0000E-01 8.2496E-03 3.4750E-04

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 JAN 1980 8:57:40 HM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\* 91119065 QY, RF FIFTH IRRADIATION PART TWO SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S604F TYPE OF SAMPLE: STANDARD SAMPLE QUANTITY: 6894, 000 UNITS: LIG SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TABL

:4:

ACQUISITION DATE: 11JAN80 2124:20 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SENSITIVITY: 600. SEC 5. 000 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETECTOR: GFL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

EMERGY WINDOW 499. 787 10 674.920

ENERGY HREH BKGND FMHM CHANNEL LEFT PW CTS/SEC XERR FIT 2 1 559.08 16336. 2671. 2.12 1118.50 1108 35 2 723E 01 0.98.70F 01 2 2 563.99 242090. 1988. 1.86 11.28. 31. 1108 35 4.035E 02 0.2 3 1. 602, 66 14361. 2274. 1.83 1205.58 1196 17 2.393E 01. 1. 0 7. 78E 🗪 4 645.80 1 1061. 1665. 2.05 1291, 81 1284 20 1.768F 00 6.2 1.17E 00 1 656. 97 1489. 1211 1.98 1314.13 1306 15 2.481E 00 4, 2 1, 89E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

PK IT

ELEMENT AREA ENERGY CONCENTR. ERROR CONSTANT ERROR (1 SIGMA) (1. SIGMA) %-COPPER 511. 0 0. 0.0000E-01.0.0000E-01.0.0000E-01.0.0000E-01 %-ANTIMONY 564. 1 0. 0.0000E-01 0.0000E-01 0.0000E-01 0.0000F-01 X-ARSENIC 657.4 1.489. 1.0000E-01 0.0000E-01 8.7537E-03 3.6770E-04

# SUMMARY OF STANDARD CONSTANTS:

4	FIEMENT	%-COPPER	e a	511. 99	a MEU
			111	-1.1.1. 216	0 0.5.9

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626D S626E S626F	7. 8000E-02 7. 8000E-02 7. 8000E-02	8. 21.09E-02 7. 8497E-02 7. 9441E-02	1. 4337E-03 1. 6325E-03 1. 5081E-03
MEAN CONSTANT,	3 STDS:	8. 01.66E-02	8. 7658E-04

# 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	FRROR (4 SIGMA)
S626D S626E S626F	7. 2000E-01 7. 2000E-01, 7. 2000E-01.	4.6343E-02 4.4999F-02 4.1917E-02	1. 1635E-04 1. 2983E-04 1. 1158E-04
MEAN CONSTANT	3 STDS:	4.4305E-02	6.8434E-05

# 3. ELEMENT %-ARSENIC AT 657, 41. KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604D S604E S604F	1.0000E-01 1.0000E-01 1.0000E-01	8. 2163E-03 8. 2496E-03 8. 7537E-03	2. 9895E-04 3. 4750E-04 3. 6770F-04
MEAN CONSTANT,	3 STDS:	9. 3745E-03	1. 9293E-04

\*\*\*\*\*\*\*\*\* 1.4 JAN 1.980 8:59:14 AM \*\*\*\*\* \*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UMKNOWN

SAMPLE QUANTITY: 10256.00 UG UNITS:

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: FFF. TAB1

\*

ACQUISITION DATE: 11JAN80 941:47 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SENSITIVITY: 600. SEC 5.000 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 2600:T79 1434:06 \* ENERGY TOLERANCE: 0.5003803 KEY/CHNL:

\* HALF LIFE RATIO: 8. 00

2. 000KV

-0.5932283 KEV ABUNDANCE LIMIT: 85. 00%

:+:

#### UNKNOWN SAMPLE REPORT

656.85

665.19

1

5311.

277.

1553.

972.

OFFSET:

ELFMENT	PFAK ENERGY B	KGND	AREA	CONCEN	ITR.	1 SIGMA ERROR	ZERROR
♣ %-ANTIMONY	51.0. 6 563. 8 656. 9	1803. 15	78360.	0. 733	:81	0. 0022	
	318. 32 460. 53 271. 27	3. 577.	590.	531.	460.		382.
1126:18319.	12951. 1171 31446. 3942 203. 20	0. 33788.	1.8714.	6141.	1342.	320.	228.
<ul><li>1310: 187.</li><li>1319: 80.</li></ul>	84. 9 383. 78 59. 8 PULSE-PILE-UP	6. 1136. 0. 87.	1329. 89.	1192. 83.	601. 74.	269. 90.	
•	GY AREA						SEC ZERR
1. 1 510. 2 2 558. 3 2 563. 4 1 602. 5 1 645.	89 52563. 85 158360. 50 8741.	2195. 1803.	1. 94 1. 91	1021, 58 1118, 12 1128, 02 1205, 27 1291, 38	1108 1108 1195	16 3.042 33 8.761 33 2.639 18 1.457 18 1.109	E 01 0.5 E 02 0.3 E 01 1.3

1.97

1.66

1313.90 1305

1330.56 1325

18 8.851E 00

12 4.617E-01 17.0

91119065 QY,RF FIFTH IRRADIATION PART TWO

| SAMPLE DATE: 10JAN80 1146:00 | SAMPLE IDENTIFICATION: 02228

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 12375.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

+

ACQUISITION DATE: 11JAN80 952:29 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIMF: 634. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. L.IB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KY KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

+

## UNKNOWN SAMPLE REPORT

1

1.

656, 84

664.97

6422.

388.

1571.

927.

• ELEMENT	PEAK EMERGY	BKGND	HREH	CONCENT		. SIGMA ERROR	%ERROR
%-COPPER X-ANTIMONY %-ARSENIC	563.8	1939. 17	7497.	9. 6829	€	0. 0019	0.3
	375. 3 487. 5 308. 3	28. 617.	643.	615.	525.	435.	395.
1117:11753. 1126:20446. 1135: 248.	35165. 440	85. 37927.	20721.	7096.	1.485.	416.	8785. 288. 229.
• 1310: 221. 1319: 96.	108. 468. 9 79. ULSE-P1LE-U	28. 1338. 85. 84.	1677. 102.	1292. 82.	777. 74.	308. 90.	
PK IT ENER		PKGND		CHANNEL. L			SEC ZERR
<ul> <li>1 1 510.</li> <li>2 2 558.</li> <li>3 2 563.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	89 60533. 85 177497. 50 9915.	4819. 2390. 1939. 2300. 1404.	3. 11 1. 95 1. 91. 1. 90 1. 87	1021, 71 1 1118, 12 1 1128, 02 1 1205, 26 1 1291, 35 1	1108 3 1108 3 11.97 1	:2 1. 009  :2 2. 958  .8 1. 652	F 02 0.4 F 02 0.2

1.98

2.03

1313.87 1.304

1330.11 1325

18 1.070E 01

11 6.473E-01 12.2

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10287.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:+:

ACQUISITION DATE: 11JAN80 1003:15 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

:+:

DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

1

1

656.83

664.95

5575.

306.

1397.

1.024.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-ANTIMONY	563. 9	1668.	160259.	0. 0129 0. 7432 0. 1945	0.0022	5. 7 0. 3 2. 8
1018: 385		516. 56	53. 569.	295. 39 525. 47 287. 28		
1117:10430 1126:18379 1135: 210	. 31662. 3	9708. 3403	38. <b>1910</b> 5.		99. 371.	7971. 196. 196.
<pre>1340: 210 1349: 79</pre>	. 393.	797. 12: 63. (	24. 1.408. 58. 70.	87. 8 1109. 66 80. 8 CORRECTION	55. 269. 35. 90.	
PK IT ENE		A BKGNI		CHANNEL LEFT		SEC ZERR
<ul> <li>1 1 518</li> <li>2 1 558</li> <li>3 1 563</li> <li>4 1 602</li> </ul>	.89 5307 .85 16025	9. 462 2. 202 9. 166 8. 251	9. 1.93 3. 1.92	1021.75 1014 1118.11 1107 1128.03 1107 1205.23 1195	7 34 8.845 7 34 2.671	E 01 0.5 E 02 0.3
	. 40 ore i. 77 59			1291. 75 1285		

1.99

2.15

1313.84 1303

1330.08 1323

19 9.292E 00

13 5, 1,04E-01 15, 8

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8484.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TAB1

:+:

### ACQUISITION DATE: 11JAN80 1013:57 \* FWHM(1332) 2.390
| PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
| ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER: 15.0 %
| ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

656.84

664.98

1

5910.

310.

1359.

899.

ELEME	4T	F F P	YEAK JERGY	BK(	GND	AREA	CONCE	NTR.	1 SIGMF ERROR	-	ROR
● %-FINT	LMONY	12 4.	63. 8	15	5 <b>12</b> . 1.	56477.	0. 01: 0. 88: 0. 25:	15	0. 0026	•	Ø. 3
1018	: 341		379.	490.	501	. 514.	295. 532. 300.	437.	359.	349.	
1126		. 30	1844.	38634.	33275		1167. 6172. 160.	1282.	330.		
1310	: 228 : 76	•	422. 90.	851. 60.	1200 71	. 1468. . 63.	95. 1240. 78. CORREC:	670. 78.	254. 80.	1.04.	
PK I	T ENE.				BKGND		CHANNEL			:/SEC:	ZERR
2	1 510 1 558 1 563	. 88	55	978.	4451. 1872. 1512.	2. 61 1. 94 1. 92	1021. 91 1118. 10 1128. 02	1107	15 2. 20 33 9. 18 33 2. 60	:0E 01	7. 7 9. 4 9. 3
• 4	1 602 1 645	. 51					1.205. 28 1.291. 62	1195	18 1.50 18 1.08	19E 01	1. 2 9. 4

2.02

1.92

1313 87 1303 19 9 849E 00

- 11 5. 173E-01 1.4. 8

1330.14 1325

91119065 QY,RF FIFTH IRRADIATION PART TWO

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: 7246.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:<del>[</del>:

ACQUISITION DATE: 11JAN80 1024:40 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

:†:

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENFRGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+

#### UNKNOWN SAMPLE REPORT

656, 87

665, 19

1.

5809.

316.

1252.

1105.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTA	1. SIGMA R. ERROR	XERROR
● %-NW1 IMONY	563.8	1670.	159535.	1 0543	0. 0011 0. 0031 0. 0081	0. 3
• 1009: 322 1018: 347 1027: 302	418.	469. 5	569. <b>51</b> 3.	514.	344. 345. 462. 391. 278. 272.	338.
1117:10824. 1126:18556. 1135: 194.	31879. 3	9211. 339	314. 2793 987. 18626. 156. 151.	. 6208. 1	L273. 2887. L334. 308. 170. 198.	201.
1319: 80.	405. 74.	786. 1: 73.		. 1262. . 86.	690. 280. 73. 70.	115.
PK IT ENE					SM – 1.000 EFT PW CTS/	SEC: ZERR
1 1 510. 2 2 558. 3 2 563. 4 1 602. 5 1 645.	89 5511 84 15953 50 883	6. 492 3. 206 5. 167 6. 183 4. 113	55. 1.94 70. 1.92 L6. 1.91	1021.76 10 1118.11 11 1128.01 11 1205.26 11 1291.38 12	1.07 34 9.185 107 34 2.659 197 1.6 1.473	E 01 0.4 E 02 0.3 E 01 1.3

1. 97

1.. 92

1313.93 1306

1330.56 1325

16 9.681E 00

13 5.268E-01 15.9

\*\*\*\*\*\* 14 JAN 1980 9:05:09 AM \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8903, 000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 11JAN80 1035:22 \* FWHM(1332) 2, 399 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* MBR ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

665. 21

266.

655.

1. 75

1330.60 1325

11 4.441E-01 14.9

ELEMENT		BKGN	ID	AREA	CONCE	ITR.	1 SIGMA ERROR	ZEF	ROR
X-COPPER  X-ANTIMONY X-ARSENIC	510. 8 563. 8 656. 8	373 136 112	:2. 86. 13 :5.	1.485. 2065. 4392.	0. 01.2 0. 71.3 0. 173	20 L7 96	0. 0008 0. 0023 0. 0053		6. 5 0. 3 3. 0
1009: 25 1018: 27 1027: 26	9. 354.	416.	425.	469.	437.	421.	350.	290.	
1117: 856 1126:1522 1135: 13	2. 26343.	32899.	27918.	15516.	521.5.	1043.	270.	144.	
1301: 6 1310: 15 1319: 6	0. 296.	613. 43.	960. 69.	1.178. 62.	892. 45.	546. 63.	201. 59.	108.	
PK IT EN								SEC	%ERR
2 2 55 3 2 56 • 4 1 68	0.84 1.8.89 42.3.84 1.32.50 75.54	962. Ø65. 280.	1741. 1386. 1458.	1. 92 1. 91 1. 96	1022, 10 1118, 12 1128, 02 1205, 27 1291, 28 1313, 88	1107 1107 1197 1286	16 2.475 35 7.160 35 2.201 17 1.213 13 7.418	E 01 E 02 E 01. E-01 1	6. 4 0. 5 0. 3 1. 4 10. 5 1. 9

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 JAN 1980 9:06:19 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 4:4:4:4:4:4:4:4:4:4:4:4:4:

91119065 QY,RF FIFTH 1RRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 1.0368, 00 UMITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 11JAN80 1046:00 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 5.000 600. SEC \* SENSITIVITY: ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GFL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

UNKNOWN SAMPLE REPORT

•	ELEMENT		PEAK ENERGY	BKG	MD	AREA	CONCEN		1 SIGMA ERROR	ZERF	ROR
•	X-COPPE X-ANTIM X-ARSEN	ON't	510. 7 563. 8 656. 9	40 15 10	23. 14	1.660. 6045. 5289.	0. 011 0. 677 0. 186	<sup>7</sup> 1	0. 0007 0. 0021 0. 0053	Ę	5. 1 7. 3 2. 8
•	1009: 1018: 1027:	266. 333. 306.	264. 406. 267.	239. 491. 274.	289. 527. 278.	310. 582. 288.	266. 509. 271.	274. 479. 291.	325. 376. 286.	31.1. 333. 261.	
•	1117:1 1126:1 1135:		12238. 28950. 165.	10893. 36104. 168.	6373. 30864. 142.	2581. 1.7350. 145.	1089. 5654. 138.	1169. 1171. 154.	2699. 300. 146.	7265. 199. 169.	
•	1301: 1310: 1319:	79. 186. 76.	68. 381. 62.	85. 730. 55.	75. 1106. 62.	75. 1342. 56.	67. 1112. 58.	79. 623. 62.	84. 230. 57.	97. 93. 77.	
_	•	۴	ULSE-F11	_E-UP C	ORRECTE	D DATA.	CORRECT	riow =	1. 000		

	PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	РΜ	CTS/SEC	ZERR
)	1	1	510.73	1660.	4095.	2. 67	1021.86	1015	15	2. 767F 00	6. 0
	2	1	558. 88	49870.	1873.	1. 94	1.11.8. 09	11.07	35	8. 312E 01	0.5
_	.3	1	563.85	146045.	1523.	1. 92	1128.02	1107	35	2. 434E 02	Ø. 3
)	라	1	571. 59	111.	1224.	1.68	1143. 49	1141	9	1.857E-01	45. 4
	S	1	602. 50	8069.	1674.	1. 95	1205.27	1195	<b>4.8</b>	1. 345E 01	1.3
_	6	1	645. 58	577.	931.	2. 27	1291. 36	1286	14	9. 613E-01	8. 6
•	i <sup>c</sup>	1	656.85	5289.	1036.	1. 98	1313. 90	1306	16	8.815E 00	1.6
	8	1	664. 98	349.	718.	1. 90	1330.14	1326	11	5.811E-01	12. 1

\*\*\*\*\*\*\*\*\*\* 14 JAN 1980 9:07:31 AM \*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: Q222H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8009, 000 UNITS: LIG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TABL

ACQUISITION DATE: 11JAN80 1056:42 \* FWHM(1332) 2, 390 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5, 999 ELAPSED REAL TIME: 768. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 699. SEC \* MBR ITERATIONS: 10.

\*

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

\*

#### UNKNOWN SAMPLE REPORT

656. 72

664.98

1

27290.

1745.

•	ELEMENT	PEAK ENERGY	PKG	ND (	AREA	CONCE		1 SIGMA ERROR	ZE.F	ROR
•	%-COPPER %-ANTIMONY %-ARSENIC	563. 7	138	11. 80·	4458.	4. 838	31	0.0093		0.2
•	1009: 2024 1018: 1892 1027: 1904	1881.		1913. 2007. 1771.	1993.	1972.	1874. 1970. 1780.		1785.	
•	1117:56746 1126111577 1135: 3429	<sup>,</sup> 1711.57.		150074.	78568.	7473. 27883. 2516.		4977.	55570. 3998. 2414.	
•	1301: 807 ) 1310: 1643 1319: 885		4939. 834.	6703. 862.	6960. 859.	5644. 811.	3214. 818.	1626. 819.	1033.	
	PK IT EME	RGY A	REA	BKGND	FЫНМ	CHANNEL	LEFT P	W CTS.	'SEC	XERR
•	2 3 563	8.71 804 9.91 3	458. :043.	13905. 13811. 17587. 22608.	2. 03 2. 00 2. 57 1. 99	111.7.85 1127.75 11.42.13 1205.01	1106 1106	43 4. 499 43 1. 349 43 5. 079 18 7. 130	LE 00	0. 2 0. 1. 6. 4 0. 7
-	5 1 631	18 5. 49        2	279.	9908. 10899.	1 40 1. 97	1262. 59 1291. 18	1259		5E-01 :	50. 7 6. 1.

2.04

2, 22

1313.62 1305

1330.14 1325

14518.

8828.

17 4.548E 01

11 2.908E 00

0.9

\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 JAN 1980 9:08:40 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JHN80 1146:00 SAMPLE IDENTIFICATION: 02221

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 851.5. 000 UNITS: IJG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. 1AB1

\*

ACQUISITION DATE: 11JAN80 1109:44 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

656.85

664.99

1.

5536.

253.

1490.

1.183.

•	ELEME	TMT			EAK ERGY	BKG	iND	AREA	CONCE	M1 R.	1. SIGMA ERROR	ZEF	ROR
	X-ANT	IM	ONY	-	63. 8	17	'00. 1	.62896.	0. 01. 0. 92: 0. 24:	34	0. 0009 0. 0027 0. 0068		0. 3
•	1005 1015 1027	):	372.		389.	498.	478	s. 507.	522.	443.	311. 365. 314.	329.	
•	1126	::1	8888.	S	2316.	40311.	34753		6314.	1356.	2978. 368. 181.	221.	
•	1316	i:	180. 74.		404. 64.	743. 57.	1239 70	). 1471. ). 92.		643. 75.	267. 77.	113.	
•	PK 1	7									T. 888 PW C15/	'SEC	ZERR
•	1 2 3	1	510. 558. 563.	89	55	1.67. 265. 896.	2044.	1.94	1.021.85 1118.11 1128.02	1107	15 1.944 34 9.211 34 2.715	.E 01.	8. 8 0. 4 0. 3
	4 5		602. 645.			181.		1.92	1.205. 27 1.291. 46	1194	22 1. 530 16 9. 761	E 01	1. 3 9. 6

1.90

1.87

1313.89 1306

1330.16 1325

18 9.227E 00

13 4.21.4E-01 20.2

91119065 QY.RF FIFTH IRRADIATION PART TWO

| SAMPLE DATE: 10JAN80 1146:00 | SAMPLE IDENTIFICATION: 0222J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5933.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF.TAB1

\*

:+:

### ACQUISITION DATE: 11JAN80 1120:26 \* FWHM(1332) 2.390
| PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
| ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
| ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:40

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

## UNKNOWN SAMPLE REPORT

656.85

2961.

581.

•	ELEMEN	<u> </u>	PER ENER		8KG	iMD	HREH	CONCE	NTR.	1 SIGN ERRON		ROR
•	Z-AWTI	MONY	563	3.9	٤	56. I	87109.	0. 01 0. 71 0. 18	00	0.003	LØ 27 59	7. 5 0. 4 3. 2
•	1018:	166.		35.	277.	306	. 163. . 322. . 126.	301.	272	. 181 . 207 . 1.65	<sup>7</sup> . 1.88.	•
•	1126:	5505. 9862. 83.	1749	A8. 2	21719.	18697.	. 10340.		728	. 133	L. 4183. 3. 87. 9. 90.	•
•	1310: 1319:	108. 37.	18	37. 45.	417. 34.	642. 43.	. 755. . 37.	44. 657. 47. CORREC	322 32	. 128 . 35	8. 49. 5. 42.	
	PK 1T	ENEF	(GY	ARI	ΞA	BKGND	FWHM	CHRNNEL	LEFT	ры ст	rs/sec	%ERR
•	1 1 2 1 3 1	558.		2828	36.	2639. 1128. 856.	1. 91	1022, 15 1118, 13 1128, 03	1108	34 4.7	789F 00 71.4E 01 452F 02	7. 4 0. 6 0. 3
	9 4 1 5 1		49		51	893. 572.		1205. 25 1291. 34	1194	19 8.9		1. 7 9. 8

1.92

1313.89 1307

15 4.935E 00

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7218.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*\*\*\*\*\*

:+:

:4:

+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

\*

# UNKNOWN SHMPLE REPORT

665. 09

744.

2155.

ELEMENT	PEAK ENERGY BK	GND	AREA	CONCEN		1 SIGMA ERROR	ZEF	ROR
● %-AMTIMONY	51.0. 7 · 8 563. 8 · 4 656. 8 · 3	1015. X1	.1495.	2. 0910	2	0. 0050		9. 8 0. 2 2. 6
• 1009: 602. 1018: 650. 1027: 597.	750. 79¢	l. 867.	803.	640. 826. 550.	771.	606. 719. 574.	630.	
1117:21174. 1126:37788. 1135: 568.		. 65187.	34649.	11765.		6299. 917. 448.	1.6838. 668. 494.	
<pre>131.0: 423. 1319: 192.</pre>	191. 178 857. 1593 179. 153 ULSE-PILE-UP	2481. 155.	2746. 171.	2283. 160.	1240. 171.	531. 171.	286. 280. 209.	
PK IT ENER		BKGMD	FЫНМ	CHANNEL, I			'SEC	XERR
<ol> <li>1. 1 510.</li> <li>2 1 558.</li> <li>3 1 503.</li> <li>4 1 602.</li> </ol>	86 105234. 82 311495.	8631. 4593. 4015. 5359.	2. 79 1. 95 1. 93 1. 95	1021.76 : 1118.05 : 1127.96 : 1205.21 :	1108 : 1108 :	14 2.347 34 1.754 34 5.192	E 02	9. 7 0. 3 0. 2
5 1 645. 6 1 656.	64 1185.	0.505. 2940. 3230.	). 30 2. 25 1. 98	1291.49	1283 :	23 2.919 16 1.975 19 1.827	E 00	1. 0 7. 1. 1. 2

2.12 1330.35 1324 13 1.241E 00

\*\*\*\*\*\*\* 9:12:12 AM \*\*\*\*\*\*\*\*\*\*\*

91119065 QY.RF FIFTH IMPADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222L

TYPE OF SAMPLE: UNKNOWN

8711.000 SAMPLE QUANTITY: UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE WAME: EFF. TABL

ACQUISITION DATE: 11JAN80 1142:07 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 624. SEC \* SHAPE PHRAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NEW ITERATIONS:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL:

\* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

656.83

665.30

1

4585.

261.

1197.

777.

• ELEMENT	PEAK EMERGY	BKGND	AREA	CONCE	MTR.	1 SIGMA ERROR	<u> </u>	JR 
X-COPPER X-ANTIMONY X-ARSENIC	563.8	1428.	132377.	Ø. 73	77	0.0023	Ø.	3
• 1009: 254. 1018: 317. 1027: 266.	348.	399.	479. 44	48. 467.	404.	337.	270.	
1117: 8589. 1126:15591. 1135: 154.	26420. 3	(2533. 27	910. 155	32. 936. 37. 4896. 50. 118.	1016.	243.	133.	
1301: 69. 1310: 146. 1319: 58. F	334. 52.	673. 74.	989. 120 59. ;	37. 9 <b>5</b> 7.	494. 63.	242. 59.	85.	
PK IT EMER						W C15/	SEC %E	ERR
<ul> <li>1. 1 510.</li> <li>2 1 558.</li> <li>3 1 563.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	84 13237 48 743	54. 16 77. 1.4 80. 13	83. 1.94 28. 1.91 82. 1.91	4 1118.11 3 1128.00 3 1205.23	1107 11107 11195	18 2.386 36 7.361 36 2.206 18 1.238 14 8.817	2 01 0. 2 02 0. 3 01 1.	3

1.93

1.74

1313.84 1306

1330.77 1326

19 7.642E 00

12 4.351E-01 16.3

\*\*\*\*\* 14 JAN 1980 9:13:21 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9700.000 UNITS: LIG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*\*\*\*\*\*\*

ACQUISITION DATE: 11JAN80 1152:45 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAHSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

DETFCTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHML: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

# UNKNOWN SAMPLE REPORT

1.

1

656, 89

665.01

5005.

391.

1169.

721.

•	ELEMEN	T		EAK KERGY	BKO	3ME>	f	HREA	COM	CEN			GIGMA ROR		ROR
	X-COPPI X-AMTII X-ARSEI	MOMY		63.8	15	551.	152	2317.	Ø.	763	<b>?</b> ?	0.	0023		0. I
•	1009: 1018: 1027:	347.		371.	466.	51	.4.	282. 581. 283.	50	9.	430		355.	344.	
•	1126::	1.8029.	36	ð656.	37258.	3193	₹7.	2468. 17744. 142.	575	1.	1207	•	2714. 296. 167.	217.	
•	1310: 1319:	159. 79.		392. 77.	747. 69.	110 7	95. 72.	60. 1278. 67. DATA.	103 7	3. 3.	532 56	•	237. 71.	94. 73.	
•								<b>Г</b> ЫНМ					•		ZERR
•	3 1 4 1	558. 563. 602.	88 83 49	152	523. 485. 317. 381.	1551		1. 93	1021. 1118. 1127. 1205.	99 99	1197 1197	33 33	2. 705 8. 084 2. 539 1. 397	LE 01 9E 02	5. 9 0. 5 0. 3 1. 3
	5 1	645.	65	•	730.	1.104	ŀ.	2. 55	1291.	51	1284	16	1. 217	7E 00	7. 4

1.96

2. 19

1313.79 1305

1330.20 1325

17 8.342E 00

11 6.509E-01 11.0

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222N

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9779.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:†:

:4:

:4:

ACQUISITION DATE: 11JAN80 1203:27 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SFC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBI

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

# UNKNOWN SAMPLE REPORT

665. 19

315.

971.

1.. 98

1330.55 1323 15 5.251E-01 15.1

ELEMENT	PEAK ENERGY E	KGMD	ARFA	CONCENTR.	1 SIGMR ERROR	ZERROR
Z-COPPER X-ANTIMONY Z-ARSENIC	563.8	1576. 1.4	13641.	0. 7 <b>15</b> 8	0. 0022	Ø. 3
<b>1</b> 009: 294.	269. 27 359. 43	'4. 242. '0. 491.	256. 489.	298. ; 465. ;	293. 299. 473. 353. 266. 269.	321. 303.
1117: 8974. 1126:16877. 1135: 178.	28531. 3550	19. 30426.	1.6845.	5316. 1:		7163. 179. 162.
● 1310: 187. 1319: 67.	75. 7 377. 67 60. 6 ULSE-PILE-UF	'4. 1083. .2. 54.	1246. <i>6</i> 2.	993. ! 66.	546. 224. 64. 75.	1.12. 102. 66.
PK IT ENER		BKGND	FWHM		R - 1.000 FT PW CTS/:	SEC XERR
<ul> <li>1. 1. 510.</li> <li>2. 1. 553.</li> <li>3. 1. 563.</li> <li>4. 1. 602.</li> <li>5. 1. 645.</li> <li>6. 1. 656.</li> </ul>	88 45269. 84 143641. 47 7937. 51 621.		2. 87 1. 92 1. 92 1. 95 2. 33 1. 96	1022, 15 10 1118, 09 11 1128, 01 11 1205, 20 11 1291, 23 12 1313, 82 13	09 30 7.545 09 30 2.394 94 19 1.323 84 16 1.035	E 01 0.5 E 02 0.3 E 01 1.4 E 00 8.5

\*\*\*\*\*\*\*\*\* 14 JAN 1980 9:15:41 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02220

TYPE OF SAMPLE: UNKNOHN

SAMPLE QUANTITY: 9124, 000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ACQUXSITION DATE: 11JAN80 1214:05 \* FWHM(1332) 2, 390 PRESET TIME(L1VE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 666. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

:+:

DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2. 000KV 0.500380X KEY/CHNL: \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

1.

656, 80

665. 02

12037.

715.

3791.

2148.

• EL	EMEN	1T		-	PEAK JERGY	BK	GND	··· ···· ····	AREA	CO1	ICE!	ATR.	1 S EF	SIGMA ROR	<del>-</del>	ZEF	ROR
<b>*</b> %-	-ANT]	MOM	'r'		563. 8	4	662.	34	1582. 4329. 2037.	1.	842	26	Ø.	004	3		0. 2
1	L009 : L018 : L027 :	7	49.		826.	816	. 10	3 <b>9</b> 7.	685. 928. 642.	93	32.	822	2.	808.		736.	
_ 1	L1.26	420	42.	79	0401.		. 707	721.	5650. 38074. 554.	1276	56.	3037	7. 1	.085.		9339. 736. 604.	
• 1	L301 : L310 : L319 :	= =	19. 16.		948. 218.	1830 194	. 20	581. L90.	227. 3055. 198. D DATA.	238 19	38. 90.	1433 187	₹. 7.	587. 190.		305. 291. 219.	
• P	PK IT	r E		≀GY	Ĥ		BKGI		<b>Г</b> ЫНМ			LEFT			5/SE	EC	%ERR
•	3 3	L E	i58. i63.	80	112 344	582. 794. 329.	529 460	99. 52.	2. 62 1. 97 1. 93	1118. 1127.	03 94	1016 1108 1108	33 33	2. 6: 1. 8: 5. 7:	30E 39E	02 02	8. 8 0. 3 0. 2
	4 : 5 :		.62. 45.	46 51	1.8 1	855. 332.	53: 26:		1. 97 2. 19			1195 1286	18 12	3. 1. 2. 2:		01 00	0. 9 6. 1

2.01

2.00

1313.78 1304

1330. 22 1325

19 2.006E 01

11 1.191E 00

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8006.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 11JAN80 1225:23 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITFRATIONS: 10.

:+

:†:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMFRGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

\* HALF LIFF RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

656.83

665. 07

1

4234.

191.

778.

690.

•	ELEMEN	 71.	no ma ma ma a ,	-	PEAK JERGY	BK(	and	i	HREA	400	ICEN	ITR.		IGMA ROR	ZEF	ROR
•	Z-ANT]	T MI	'Y'MC	Ë	63. 8	1:	238.	1.21	1.300. 0220. 4234.	0.	734	16	Ø.	0024		6. 6 Ø. 3 2. 9
•	1009: 1018: 1027:	:	274.		297.	398.	3	85.	245. 424. 189.	43	23.	339		312.		
•		: 1:	3768.	23	(940.		255	86.	1927. 14019. 95.	453	28.				1.42.	
•	1310:	:	145. 59.		310. 36.	566. 48.	9	39. 44.	67. 1015. 56. D DATA.	87 5	70. 54.	481 52		194. 65.	66.	
	PK I	Γ				REA						LEFT			'SEC	ZERR
•	2 :	1 1	510. 558. 563.	88 84	38 120	300. 975. 220.	1.55 123	9. 8.	2. 82 1. 93 1. 91	1118. 1128.	10 02	1107	34 34	2. 166 6. 496 2. 00	5E 01 1E 02	6. 5 0. 5 0. 3
			602. 645.		b	726. 508.	128		1. 93 2. 06	1205. 1291.		1196		1. 12: 8. 46:		1. 4 9. 0

2.00

2.32

1313.85 1304

17 7.057E 00

1330.32 1325 12 3.189E-01 20.7

91119065 QY,RF FIFTH IRRADIATION PART TWO

| SAMPLE DATE: 10JAN80 1146:00 | SAMPLE IDENTIFICATION: 02220

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8321.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

+:

ACQUISITION DATF: 11JAN80 1235:57 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SFC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:†:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLFRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIM1T: 85.00%

:†:

#### UNKNOWN SAMPLE REPORT

1.

1

656, 86

664.97

5329.

304.

•	ELEMEN	IT		PEAK VERGY	BKG	iND 	AREA	CONCE	N1R.	1 SIGMA FRROR		RROR
•	X-AMII	MONY	Ç	563. 8	1 E	315. <b>1</b> 5	57669.	0. 01. 0. 92: 0. 24:	87	0. 0028	3	0.3
•	1018:	347.		391.	449.	496.	501.	309. 475. 276.	435.	338.	324.	
•	1126:	18548.	31	L440.	38908.	6430. 33361. 179.	18102.		1.209.	326.	203.	
•	1310: 1319:	1.82. 77.		378. 65.	708. 61.	1148. 73.	1367. 69.	82. 1114. 52. CORREC	633. 68.	273. 77.	121. 71.	
•								CHANNEL				ZERR
•	3 1	. 558. 563.	88 83	51 ( 157 (	302.	4828. 1987. 161.5.	1.94	1021.81 1118.09 1128.00	1107	16 1, 84 35 8, 50 35 2, 60	20E 01	9. 4 0. 5 0. 3
•		602. 645.				2006. 1180.		1205. 22 1291. 43		21 1.47 16 1.02		1 3 8. 9

1.96

2.16

1148.

897.

1313.90 1305

1330.12 1325

17 8.881E 00

13 5.064E-01.15.1

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8045.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*

:4:

ACQUISITION DATE: 11JAN80 1246:40 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 630. SEC \* SENSITIVITY: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

•••

:+:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

:+:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

1.

665. 13

425.

817.

2. 63

1330,44 1325 11 7,087E-01 10,7

ELEME	MT.	P'E ENE		BKG	ND	ARFH	CONCE	VTR.	1 SIGMA ERROR		ROR
₩ %-HNT	TMON4'	56	53. B	18	36. 16	6620.	0. 016 1. 01.7 0. 275	79	0.0030		6. 6 0. 3 2. 8
1009 1019 1027	: 388.	ž		424.		499.	304. 512. 295.	444.		379.	
1126		33:	592.	40881.		18895.	1202. 6279. 174.	1295.	334.	232.	
	): 177. ): 78.		457. 75.	847. 99.	1283. 84.	1419. 66.	89. 1132. 82. CORRECT	653. 59.	266. 79.		
•					BKGND		CHANNEL			/SEC	ZERR
• 1 2 3 4 5 6	1 510 1 558 1 563 1 602 1 645	. 88 . 83 . 48 . 60	546 1666 94	571. 520. 181. 759.	1768. 1617.	1. 94 2. 30	1021, 97 1118, 09 1127, 98 1205, 23 1291, 41	1107 1107 1197 1283	18 2. 76 35 9. 11 35 2. 77 17 1. 58 22 1. 26	2E 01 7E 02 0E 01 4E 00	6. 6 0. 4 0. 2 1. 2 8. 3
6	1 656	. 80	57	737.	1490.	2.00	1313. 78	1305	20 9.56	2E 00	1. 6

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222S

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8163.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:†:

ACQUISITION DATE: 11JAN80 1257:22 \* FWHM(1332) 2.390
PRESET TIME(LIVF): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

**,** \*

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL, LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

+

#### UNKNOWN SAMPLE REPORT

665.13

264.

488.

1.87

1330.44 1326

10 4.400E-01.13.3

EL	EMEN	T		EAK ERGY	BKG	iND	AREA	CONCE	VT R.	1 SIGMA ERROR		ROR
<b>*</b> %-	-AMTI	MONY	5	63.8	11	.60. 11	.8056.	0. 711	15	0. 0009 0. 0024 0. 0056		7. 4 0. 3 3. 1
1						414. 203.				328. 212.		
_ 1	.1.26 :	14002.	23	325.	28758.	24953.	13803.		930.	2187. 223. 113.	160.	
<b>1</b>	310:	117. 51.		269. 57.	608. 44.	895. 44.	998. 44.	786. 56.	432. 49.	62. 178. 42.	82. 55.	
• F	°K IT									1.000 W CTS/		ZERR
•	2 1 3 1 4 1 5 1	558. 563. 602.	88 84 48 64	381 1186 66	L14. 356. 336. 147.	3424. 1453. 1160. 1888. 798. 1121.	1 94 1. 88	1022.08 1118.09 1128.01 1205.24 1291.48 1313.78	1108 1108 1194 1286	15 2.053 32 6.353 32 1.968 25 1.106 14 7.453 19 6.436	2E 01 3E 02 3E 01 3E-01 1	7.3 0.5 0.3 1.5 10.1 2.0

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0222T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8652.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 11JAN80 1307:56 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

+:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

+

#### UNKNOWN SAMPLE REPORT

656, 85

665. 09

1

3760.

200.

91.8.

624.

ELEMENT	PEAK ENERGY	BKGND	HR)	EA	CONCEN		1. SIGMA ERROR	%ERROR
X-COPPER X-ANTIMONY X-ARSENIC	563.8	1202.	1105	10.	0. 629	5	0. 0009 0. 0021 0. 0052	Ø. 3
1009: 213 1018: 264 1027: 205	ł. 316.	398.	446.	426.	448.	388.	201. 320. 170.	235.
1117: 7013 1126:12859 1135: 118	9. 22220.	27199. 2	3771. 1	2737.	4312.	851	1992. 220. 108.	124.
1301: 47 1310: 134 1319: 55	ł. 275.	558. 46.	748. 50.	947. 47.	787. <b>61</b> .	449. 43.	166. 41.	68.
PK IT ENE							W CTS/:	SEC %ERF
2 2 550 3 2 563 <b>)</b> 4 1 600	8.88 %56 8.84 1105 2.48 62	97. 15 319. 15 27. 15	202. 1 183. 1	. 94 . 91 . 94	1118, 10 1128, 02 1205, 23	1110 1110 1196	17 2. 8841 32 5. 9681 32 1. 8421 19 1. 0381	5 01 0.6 5 02 0.3 5 01 1.5
5 1 64			910. 2		1291. 51		17 6. 6111	E-01 11.9

2.02

1.98

1313.89 1304

1330.35 1326

18 6.267E 00

12 3.327E-01 19.1

\*\*\*\* 14 JAN 1980 9:22:42 AM 

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9945, 000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 11JAN80 1318:29 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 638. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

DETECTOR: GEL1-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

665.11

453.

11.28.

•	ELEMI	ЕМТ 	***** ***** **** **** ***		YEAK VERGY	. BKG	ME)	AREA	CONCE	NTR.	1 SIGMA ERROR		ROR
	X-AM	TIM	ONT	5	563. 8	23	53. 19	99866.	Ø. 99:	24	0. 0010 0. 0027 0. 0072		7. 3 0. 3 2. 8
•	100: 101: 102:	8:	378. 496. 394.			522.	564.	395. 614. 347.			470.		
•	112	6:2	2770. 3791. 288.	40	ð251.	49330.	41634.		1447. 7477. 238.	1619.	467.	10444. 301. 240.	
•	130: 131: 131:	0:	271. 108.		511. 93.	916. 1.04.	1449. 117.	1661. 99.	1424.	789. 98.	117. 315. 92. 1. 000	155. 118.	
0	PK	IТ					BKGMD				YW CTS		%ERR
•	1. 2. 3. 4. 5. 6.	1 1 1	558. 563. 602.	87 83 50 67	64: 199: 11:	395.	2829. 2353. 2503. 1590.	3. 49 1. 94 1. 93 1. 95 1. 98 1. 99	1021.98 1118.08 1127.98 1205.26 1291.54 1313.88	1109 1109 1194 1285	16 2 690 33 1 070 33 3 33: 19 1 89: 15 1 23: 17 1 09:	0E 02 1E 02 9E 01 7E 00	7. 2 0. 4 0. 2 1. 1 8. 4 1. 5

2.07

1330.39 1325

12 7.558E-01 11.5

\*\*\*\*\* 14 JAN 1980 9:23:52 AM \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02238

TYPE OF SAMPLE: LINKNOWN

SAMPLE QUANTITY: UNITS: 6360.000 UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 11JAN80 1329:20 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

:4:

DETECTOR: GLLI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: KEY/CHNL: 0.5003803

2. 000KV \* HALF LIFE RATIO: 8. 00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

664. 77

1

180.

647.

ELEMENT -	PEAK FNERGY	BKGN	Ď	AREA	CONCENT	FR.	1 SIGMA ERROR	XERROR
%-COPPER MARIMONY %-ARSENIC	51.0. 8 563. 9 656. 8	2633. 876. 845.		741. 5051. 3196.	0. 0098 0. 7394 0. 1.974	3 <del>1</del> 1	0. 0010 0. 0027 0. 0063	10.5 · 0.4 3.2
• 1009: 183. 1018: 201. 1027: 179.	221.	251.	299.	320.		249.	236.	213.
1117: 5984. 1126:10854. 1135: 88.	18803. :	23524.	20382.	11239.	3684.	699.	166.	106.
1301: 39. 1310: 106. 1319: 39.	247. 44.	466. 54.	676. 27.	771. 41.	671.	374. 39.	135. 53.	58.
PK IT ENER	RGY ARI	EA B	KGND	FWHM	CHAMMEL L	EFT P	W CTS/	SEC %ERR
<ul> <li>1 1 510.</li> <li>2 2 558.</li> <li>3 2 563.</li> <li>4 1 602.</li> <li>5 1 645.</li> <li>6 1 656.</li> </ul>	89 305 85 950 48 52 67 3	41. 73. 51. 71. 79. 96.	1129. 876. 945. 581.	1. 91. 1. 94 2. 26	1022, 10 1 1118, 12 1 1128, 03 1 1205, 23 1 1291, 55 1 1313, 86 1	1107 1107 1195 1284	33 5.096 33 1.584 18 8.784	E 02 0.3 E 00 1.6 E-01 10.4

2.36

1329.71 1324

- 14 3.005E-01,21.3

\*\*\*\*\*\*\*\*\* 14 JAN 1980 9:25:01 AM \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMP1.E DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02230

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: . 6922. 000 UG UNITS:

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TABL

ACQUISITION DATE: 11JAN80 1339:50 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 % ELAFSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 1.0.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

\*\*\*\*\*\*\*\*\*\*

#### UNKNOWN SAMPLE REPORT

1.

1

656, 87

664.95

3293.

251.

675.

498.

•	ELEMEN	T	PE ENE		BKG	MD	AREA	CONCE	NTR.	1 SIGMA ERROR		ROR
•	X-ANTI	MONY	56	3. 9	9	93. 9	7262.	0. 69	65	0. 0011 0. 0025 0. 0058		0.4
•	1009: 1018: 1027:	204.	2	27.	291	346.	313.		286.	189. 252. 169.		
•	1126:	10822.	191	Ø5.	24297.	21220.	1.1617.		807.	1608. 178. 94.	110.	
•	1310:	161. 34.	2	10. 49.	444. 41.	742. 53.	797. 50.	699. 34.	427. 36.	45. 157. 44. 1. 000	54. 62.	
	) · PK IT									°W CTS		ZERR
•			92 87	312 972	35. 62.	3312. 1275. 993. 948.	1. 92 1. 89	1022. 12 1118. 17 1128. 06 1205. 32	1108 1108	18 1, 50; 34 5, 20; 34 1, 62; 16 9, 49;	SE 01 1E 02	9. 6 0. 6 0. 3 1. 5
		645.		3	48.	608.		1291. 70		13 5. 79		

1.98

2. 53

1313.93 1306

1330.07 1325

15 5.488E 00

12 4.177E-01 14.1

9111.9065 QY,RF FIFTH JRRADJATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7372.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1.

:<del>†</del>:

ACQUISITION DATE: 11JAN80 1350:21 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ARINDANCE LIMIT: 85.002

SET: -0.5932283 KEV \* ABUNDANCE L1MIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

:1

1

656, 89

665. 01

5499.

403.

1488.

930.

ELEMENT	PEAK ENERGY	BKGND	HREA	CONCENT	1 SIGMA R. ERROR	
%-COPPER %-ANTIMONY %-ARSENIC	563. 9	1854. 1	66878.	1. 1.241.	0.0033	Ø. 3
	409.	442. 488	. 504.	478.		328.
1117:10732. 1126:18306. 1135: 232.	32391. 4:		. 20637.	7207.	1268. 2630. 1487. 403. 171. 179.	269.
<ul><li>1310: 177.</li><li>1319: 83.</li></ul>	355. 92.	720. 1257 64. 87	. 1.445. . 81.	1.240. 74.	94. 96. 695. 312. 92. 82.	110. 90.
PK IT ENER					DN = 1.000 EFT PW CTS	
<ul> <li>1 1 510.</li> <li>2 2 558.</li> <li>3 2 563.</li> <li>4 1 602.</li> <li>5 1 645.</li> </ul>	92 5522: 88 16687: 52 971)	7. 4413. 9. 2268. 3. 1854. 3. 2336. 7. 1271.	1. 90 1. 90	1021, 92 1) 1118, 17 1; 1128, 09 1; 1205, 32 1; 1291, 23 1;	108 32 9.20 108 32 2.78 194 21 1.61	5E 01 0.4 1E 02 0.2 8E 01 1.2

1.89

2, 29

1313.97 1307

1330.19 1324

16 9.165E 00

12 6.714E-01 11.8

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6348.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

: †:

ACQUISITION DATE: 11JAN80 1401:06 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 722. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:-

DETECTOR: GELI-8

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE:

KEV/CHNL: 0.5003803

OFFSET: -0.5932283 KEV

\* LIBRARY: NUCL. L1B1

\* ENERGY TOLERANCE: 2.000KV \* HALF LIFE RATIO: 8.00

\* ABUNDANCE LIMIT: 85.00%

:†:

\*\*\*\*\*\*

#### UNKNOWN SAMPLE REPORT

665, 09

1.1.06.

5043.

•	ELEMENT	PEAK FNERGY	BKGN	D F	AREA	CONCE		1 SIGMA FRROR		ROR
•	%-COPPER )%-ANTIMONY %-ARSENIC	563.8	1021	4. 603	3592.	4. 731	.5			0. 2
•	1009: 137 1018: 131 1027: 131		1346. 1370. 1295.	1397.	1479.	1427.	1289.	1295.	1278.	
•	1126:7360	5. 48605. 3.121956.: 4. 1.851.	147715. 1.	24541.	68827.		6647.			
•	) 1310: 97 1319: 54	2. 568. 2. 1.739. 3. 486. PULSE-P11	3214. 491.	4707. 493.	5312. 508.	4426. 488.	2598. 502.	1173. 507.	666.	
	•	ERGY A						°W CTS	'SEC	XERR
•	2 1 56 3 1 60	3.82 603! 2.46 35(	592. 1 313. 1	0214. 2916.	1 95	1118. 04 1127. 96 1205. 20	1107	34 3.293 34 1.006 17 5.836	5E 03	0. 2 0. 1 0. 7
	9 4 1 64 5 1 65	5, 56         2; 6, 82        20;	247. 462.		2. 16 2. 00	1291. 32 1313. 83		13 3.745 17 3.416		5. 7 0. 9

1.79

1330.36 1326

10 1.844E 00

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7145.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*

:†:

### ACQUISITION DATE: 11JAN80 1413:21 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:<del>|</del>:

:+:

DETECTOR: GEL1-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:4:

#### UNKNOWN SAMPLE REPORT

5

6

1

1

1

645.78

656.91

665.05

452.

240.

3265.

741.

798.

426.

ELEMENT	PEAK EMERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-ANTIMONY	563. 9	920.	96219.	0. 0103 0. 6715 0. 1830	0. 0024	0. 4
1009: 190. 1018: 200. 1027: 180.	243.	176. 192 288. 303 182. 170	. 319.	333. 289	9. 1.89. ?. 252. 9. 140.	182.
1117: 5731. 1126:10099. 1135: 90.	18385. 23		. 12414.	691. 669 4369. 873 79. 79	3. 191.	96.
<ul><li>131.0: 83.</li><li>131.9: 45.</li></ul>	1.92. 45.	439. 675 40. 29	. 790. . 35.	56. 47 699. 436 26. 33 CORRECTION =	5. 168. 2. 35.	
PK IT ENER		A BKGND		CHANNEL LEFT		SEC XERR
<ul><li>1. 1. 51.0.</li><li>2. 2. 558.</li><li>3. 2. 563.</li><li>4. 1. 602.</li></ul>	96 3086: 91 9621:	2. 2392. L. 1249. 9. 920. 9. 1430.	1. 91 1. 90	1022. 25 1016 1118. 26 1109 1128. 14 1109 1205. 43 1196		E 01 0.6 E 02 0.3

2, 39

2.01

2. 20

1291.77 1281

1.314.01 1303

1.330, 27 1325

9. 7

2.1

1.9 7.540E-01

21 5.441E 00

12 4.004E-01 13.8

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5566.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:4:

ACQUISITION DATE: 11JAN80 1423:50 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

DETECTOR: GELI-8 \* LIBRARY: MUCL. LIBS

:+:

\*

#### UNKNOWN SAMPLE REPORT

:1.

656.87

665. 39

2592.

206.

417.

312.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	563. 9	712.	75535.	0. 0120 0. 6779 0. 1874	0. 0027	
1018: 169.	134. 1 192. 2 157. 1	18. 232.	. 264.	286. 213		163.
_ 1126: 8038.			. 9559.	3310. 727	'. 130.	<i>6</i> 9.
<ul><li>1310: 82.</li><li>1319: 40.</li></ul>	141. 3 26.	54. 534. 26. 45.	. 667. . 42.	24. 36 524. 312 25. 30 CORRECTION =	2. 130. ). 29.	
PK IT ENER		BKGND		CHANNEL LEFT		SEC MERR
1 1 510. 2 2 558. 3 2 563. 4 1 602. 5 1 645.	94 24452. 90 75535. 55 4313.	2048. 1056. 712. 1111. 500.	2. 65 1. 93 1. 90 1. 89 2. 36	1022. 24 1015 1118. 21 1110 1128. 13 1110 1205. 38 1198 1291. 61 1283	15 1. 257 27 4. 075 27 1. 259 19 7. 188 16 6. 174	E 01 0.7 E 02 0.4

1.97

2.18

1313.93 1304

1330.96 1326

17 4.320E 00

10 3.431E-01 1.4.0

91119065 QY,RF FIFTH 1RRADIATION PART TWO

| SAMPLE DATE: 10JAN80 1146:00 | SAMPLE IDENTIFICATION: 0223H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7719.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TAB1

\*

:+:

ACQUISITION DATE: 11JAN80 1434:16 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:†:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

\* HBUNDHNUE LIMII: 85.0%

# UNKNOWN SAMPLE REPORT

656.91

664.93

3133.

191.

:1.

1

•	ELEMEN	Γ		RG't'	BKG			CONCE	NTR.	1 SIC ERRO	3MA DR %I	ERROR
•	X-AMTII	YMONY	56	3. 9	8	34.	94239.	Ø. <b>6</b> 1	.10	0.00	309 322 351	연. 4
•	1018:	186.	2	70.	289.	330	. 197. . 363. . 162.	326.		24	94. 19: 40. 22: 57. 14:	1.
•	1126:	9945.	179	75.	23428.	20747	. 12143.	3996.	856.	1.7	55. 411! 79. 10: 86. 8	3.
•	1310: 1319:	89. 35.	1	98. 36.	411. 39.	625 32	. 36. . 821. . 31. ED DATA.	655. 33.	414. 41.	1:	47. 6: 47. 6: 35. 5:	ī".
•	•										:T5/SEC	ZERR
•	2 2 3 2 4 1	510. 558. 563. 571.	94 90 88	296 942	239. 96.	991. 834. 700.	1. 94 1. 90 1. 90	1118, 21 1128, 13 1144, 07	. 1107 3 1107 7 1142	36 4. 36 1. 9 1.	056F 00 933E 01 571E 02 600E-01	0. 6 0. 3 40. 3
	5 1 6 1	602. 645.					1. 87 2. 23	1205. 33 1291. 64			427E 00 851E-01	

1.. 95

2.50

1314.00 1307

1330.04 1324

16 5.222E 00

12 3.187E-01 16.9

564.

4040404040404040404040404040404 14 JAN 1980 9:32:08 AM \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6110,000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 55 INCOR EFFICIENCY FILE NAME: EFF. THB1

ACQUISITION DATE: 11JAN80 1444:46 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

306.

875.

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1.

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHNL: \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

#### UNKNOWN SAMPLE REPORT

1.

665, 26

•	ELEMENT	·····	PEAK ENERG	'Y E)k	GND	AREA	CONCE	VTR.	1. SIGMA ERROR	#.1p	ROR
•	MITMA-S	ONY	563.	9 1	696. 1	66254	1 35	47	0. 0015 0. 0040 0. 0100		ा र
•	1009: 1018: 1027:	332. 352. 279.	341 360 318	. 309 . 429 . 298	). 327 ). 469 ). 294	. 318. . 474. . 278.	298. 480. 271.	319. 418. 283.	342. 373. 301.	315. 349. 285.	
•	1126:1	7992.	31807	. 41148	3. 36919		7100.	1502.	2540. 368. 189.	228.	
•	1310:	162. 85.	X10 72	. 712 . 67	?. 1182 ?. 84	. 1379. . 70.	1141.	702. 89.	71.	99.	
•	•								'W СТS/	'SEC	ZERR
•	2 2 3 2 4 1	558. 563. 602.	93 5 90 16 56	2844. 6254. 9756.	4832. 2029. 1696. 2478. 1296.	1.93 1.98 1.89	1022.06 1118.19 1128.12 1205.39 1291.65	1107 1.1.07 1195	16 1. 751 35 8. 807 35 2. 771 23 1. 626 16 1. 085	E 01. F 02 E 01	9.9 0.5 0.2 1.2 8.7
		656.	89		1380.		1313. 97		16 8. 749		1. 7

1.98

1330.69 1326

-11 5.098E-01 1.4.8

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223J

TYPE OF SAMPLE: LINKMOWN

SAMPLE QUANTITY: 7710.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 58 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:4:

### ACQUISITION DATE: 11JAN80 1455:29 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:‡:

**>** 

14

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDAMCE LIMIT: 85.00%

:4:

#### UMKNOWN SAMPLE REPORT

1

665, 29

190.

•	ELEMENT		PEAK ENERG		:WD 	AREA	CONCE	VTR. '	1 SIGMA ERROR	%EF	ROR
•	Z-COPPE Z-ANTIM Z-ARSEN	0144	54 0. 563. 656.		574. 908. s 922.	1169. 99423. 3335.		38 78 55	0.0023		7. 0 0. 4 3. 2
•	1009: 1018: 1027:		191 250 181	. 295.	384.	202. 355. 175.	366.	296.	244.		
•	111.7: 1126:1 1135:		18854	. 7478. . 24661. . 99.	22156.	12724.		703. 885. 104.		4223. 121. 94.	
•	1301: 1310: 1319:	98. 40.	220 53	. 472.	726. 52.	81.4. 37.	741. 55.	414. 38.	61. 156. 45. 1. 000		
•	PK IT	ENER			BKGND	-D ВИНИ FWHM			PW CTS/	SEC	ZERR
•	1 1 2 2 3 2 4 1 5 1	510. 558. 563. 602. 645. 656.	94 3 90 9 56 78	5882. 436.	2674. 1203. 908. 915. 708. 922.	2, 84 1, 91 1, 89 1, 87 2, 38 1, 97	1021.83 1118.22 1128.14 1205.39 1291.77	1107 1107 1198 1284	15 1.949 29 5.403 29 1.657 15 9.804 16 7.276 19 5.558	E 01 E 02 E 00 E-01	6.9 9.6 9.3 1.9 2.2

1.90

1330.76 1324

15 3.171E-01 21.2

🕨 91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMF1E DATF: 10JAN80 1146:00 SAMF1E IDENTIFICATION: 0223K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5883.000 UNITS: UG

-0.5932283 KEV

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: FFF. 1AB1

:4:

ACQUISITION DATE: 11JAM80 1505:59 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PLAPSED REAL TIME: 721. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

: 1

DETFCTOR: GELI-8 \* LIBRARY: NUCL. LIB1

\* ABUNDANCE LIMIT: 85.00%

:+

#### UNKNOWN SAMPLE REPORT

OFFSET:

:1

665, 16

1052.

4830.

ELEMENT	PEAK ENERGY	BKGND	ARE	A CO	MCENTR.	1. SIGMA ERROR		ROR
%-COPPER %-ANTIMONY %-ARSFNIC	563.8	10594	. 61025 . 1963	6. 5	. 2215	NOT DET 0.0105 0.0344		0.2
• 1009: 133 1018: 131 1027: 126		1431. 1294. 1237.	1438. 1	444. 13	86. 1248 58. 1332 47. 1217		1278.	
	7. 47862. ; 5.123998.1; 4. 1870.	49202.12	5854. 69		70. 6767			
<b>1310: 95</b>	2. 547. 8. 1690. 6. 540. PULSE-PIL	3028. 495.	4592. 5 506.	185. 42 494. 4	53. 2548 84. 485	3. 1148. 5. 476.	683.	
PK IT EN	ERGY AR					PW CTS,	/SEC	ZERR
2 1 56 3 1 60		56. 10 91. 13	010. 1.	95 1127	.05 1107 .96 1107 .22 1197	33 3.207 33 1.017 18 5.740	YE 03	0. 2 0. 1 0. 7
<ul><li>4 1 64</li><li>5 1 65</li></ul>		16. 7 30. 9			. 28 1284. . 84 1305	14 3.520 18 3.27		6. 3 1. 0

1.67

1330.50 1326

10 1.754E 00

\* 14,JAN 1980 9:35:24 AM \*\*\*\* \*\*\*\*\*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: @223L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6120.000 UMITS: ЦĞ

SAMPLE GEOMETRY: AFFR1 55 INCOR EFFICIENCY FILE NAME: EFF. TABS

ACQUISITION DATE: 11JAM80 1518:13 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC: \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR lTERATIONS: 10.

\*

DETECTOR: GELI-8

\* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL:

0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE | 1MI): 85. 00%

\*

ELEMENT		PEAK NERGY	FKGND	Al	₹EH 	CONCENTR.		SIGMA RROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	. 1	511.0 564.1 557.4	63. 32. 23.			6.0040E-0: 2.3911E-0: 0.0017	‡	OT DETE	CTABLE CTABLE CTABLE
1009:	2.	3.	1.	2.	2.	2.	4.	5.	5.
1018:	4.	4.	7.	9.	5.	7.	7.	6.	2.
1027:	1.	1.	4.	3.	1.	0.	4.	4.	1.
1117:	0.	5.	2.	2.	3.	3.	4.	2.	2.
1126:	3.	0.	6.	1.	6.	1.	1.	2.	2.
1135:	2.	4.	2.	3.	4.	3.	0.	3.	0.
●、1301:	2.	3.	2.	1	4.	1.	5.	4.	3.
●、1310:	0.	3.	4.	2.	1.	2.	1.	1.	2.
1319:	2.	2.	0.	5.	3.	4.	2.	1.	0.

\*\*\*\*\*\* 14 JAN 1980 9:36:29 AM \*\*\*\*\*\* 

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLF DA1F: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0223M

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUENTITY: 5611.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE MAME: EFF. TABS

ACQUISITION DATE: 11JAM80 1528:27 \* FWHM(1882) 2.390 PRESET TIME(LIVE): 5.000 600. SEC \* SEMSITIVITY: \* SHAPE PARAMETER : 15.0 % ELAPSED REAL TIME: 614. SEC ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 19.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CHLIBRATED: 2600179 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEY/CHML: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1.

1.

656.93

664.76

2425.

171.

563.

380.

ELEMENT		PEAK NERGY	BKGMD	) F	IREA	CONCEN		1 SIGMA ERROR	XER	ROR
%-COPPER • %-ANTIMO %-ARSENI	NY :	563. 9	699	). 74	421.	0.670	12	0. 0013 0. 0027 0. 0060		
101.8:	164.	135. 211. 133.	217.	261	269.	261.	205.	154. 187. 141.	171.	
1126: 7	757. 1	4181. 10	3376. 1	.691.2.	9546.		675.	1084. 120. 83.	84.	
• 1310: 1319:	64. 39.	131. 27.	323. 30.	495. 27.	608. 26.	546.	318. 29.	39. 142. 32. 1 000	50.	
		HREI						W CTS/	SEC	%ERR
2 2 3 2 • 4 1	510. 72 558. 95 563. 91 602. 60 645. 66	2302; 7442; 453;	7. L. 5.	892. 699. 765.	2. 84 1. 92 1. 89 1. 95 2. 30	1021, 86 1118, 24 1128, 15 1205, 46 1291, 53	1107 1107 1197	18 1. 343 34 3. 838 34 1. 240 18 7. 559 18 5. 514	E 01. E 02 E 00	9.3 0.7 0.4 1.7 12.2

1.95

2. 27

1314.05 1305

1329.70 1324

18 4.041E 00

- 13 2.851E-01 17.8

\* \*\*\*\*\* 14 JAN 1980 9:37:39 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6722.000 UNITS: IJĠ

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TABL

\*\*\*\*\*\*\*\*\*\*

:4:

ACQUISITION DATE: 11JAN80 1538:55 \* FWHM(1332) 2.390 PRESED TIME(LIVE): 600. SEC \* SENSITIVITY: 5. 999 ELAPSED REAL TIME: 645. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2. 000KV KEV/CHNL:

0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

## UMKNOWN SAMPLE REPORT

1

656, 90

665. 22

8023.

380.

2061.

1356.

•	ELEMENT	PEAK ENERGY	BKGI	ND 1	HREA 	CONCEN		1 SIGMA ERROR	ZER	ROR
•	X-COPPER X-ANTIMONY X-ARSENIC	511. 0 563. 9 656. 9	61: 27: 20:	30. 24	1260. 3364. 8023.	0.017 1.833 0.496	28	0. 0017 0. 0047 0. 0133		9. 3 0. 3 2. 7
•	1009: 467 1018: 507 1027: 455	. 528.	450. 594. 426.	464. 537. 410.	458. 663. 429.	451. 602. 410.	490. 580. 419.	443. 542. 453.	443. 519. 442.	
•	1117:14615 1126:26310 1135: 364	. 47440.	17532. 60337. 326.	10558. 53784. 290.	4238. 30409. 319.	1724. 10514. 322.	1834. 2293. 329.	3827. 601. 322.	1.0756. 425. 339.	
•		. 499.	129. 1108. 114. _E-UP C	130. 1688. 116. ORRECTE	114. 2019. 130. D DATA.		133. 1019. 112. 10N =	150. 355. 126. 1. 000	164. 182. 131.	
6		.RGY AI	REA	BKGND	FЫНМ	CHANNEL	LEFT F	°W CTS	'SEC	ZERR
•			947.	6191. 3091. 2730.	3. 17 1. 93 1. 90	1022.35 1118.19 1128.10	1016 1107 1107	14 2, 10: 34 1, 28; 34 4, 05;	SE 05	9. 3 0. 4 0. 2
	4 1 602	.53 14:	242. 369.	3146. 1953.	1. 85 1. 98	1295.33	1195	18 2. 37·	4E Ø1.	1.0

1.95

1.72

1313.99 1304

1330.62 1326

17 1.337E 01

11 6.339E-01 14.6

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 14 JAN 1980 9:38:51 AM \_+:+:+:+:+:+:+:+:+ \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02230

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6978, 999 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TABL

\*\*\*\*\*\*\*\*\*\*\*

ACQUISITION DATE: 11JAN80 1549:53 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC 5.000 \* SENSITIVITY: ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GFL1-8 \* LIBRARY: NUCL, L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

_	ELEMEN'	T	PEAK ENERGY	BKG	ND I	, AREA	CONCENT		1 SIGMA ERROR	%ERROF	ć.
_	%-corp		510. 7	241		612.	0. 009 <i>6</i>		0. 0012	12. 1	
-	%-ANTII %-ARSEI		563. 9 657. 0			8702. 7719.	0.7402 0.1865		0. 0028 0. 0061	0. 4 3. 3	
•	1009:	161.	163.	163.	161.	166.	162.	154.	175.	170.	
	1018:	1.94.	204.	231	256.	279.	258.	231.	186.	182.	
•	1027:	162.	159.	147.	179.	139.	133.	152.	1.73.	173.	
•	1117:	4896.	6534.	6205.	3669.	1488.	629.	593.	1.227.	3600.	
	1126:	9243.	16726.	22117.	19898.	11566.	4017.	848.	164.	95.	
•	1135:	85.	75.	65.	66.	62.	71.	59.	69.	89.	
	1301:	42.	38.	50.	51.	38.	49.	49.	47.	50.	
	1310:	81.	143.	344.	537.	672.	670.	364.	141.	54.	
	1319:	40.	28.	31.	34.	39.	27.	33.	41.	40.	
_		۳	ULSE-P1	LE-UP C	ORRECTE	D DATA.	CORRECT I	.이에 =	1.000		

	PK	TT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	РШ	CTS/SEC	ZERR
)	1	3.	510. 71	612.	2408.	2. 62	1021.83	1015	15	1.020E 00	12. 0
	2	2	558. 96	26324.	960.	1.90	1118. 25	1107	33	4. 387E 01	0.6
_	3	2:	563. 91	88702.	730.	1.89	1128. 16	1107	33	1.478E 02	0. I
•	4	1.	602. 58	5197.	1880.	1 85	1205. 42	1.197	32	8.661E 00	1.8
	5	1.	645. 68	379.	511.	2. 25	1291. 56	1286	14	6. 317E-01	9. 9
	E	1	656. 98	2719.	655.	1 92	1314, 15	1305	17	4.531E 00	2. 3
ŧ	7	1	665. 71	· 326.	616.	4. 39	1331.60	1322	16	5. 431E-01	12.1

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE 1DENTIFICATION: 0223P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8155.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF.TAB1

:4:

ACQUISITION DATE: 11JAN80 1600:24 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSFD REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %
ELAPSFD LIVE TIME: 600. SEC \* NBR 17ERATIONS: 10.

:4:

DETECTOR: GELI-8

8 \* LIBRARY: NUCL.. L<u>i</u>B1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

1.

665. 32

429.

932.

2.84

1330.81 1322 18 7.153E-01 11.2

•	ELEMEN	T	PEAK ENFRG'	r' BKG	ND	HREA	CONCE		1 SIGMA ERROR	ZEF	ROR
•	X-ANTI	MONY	563. 9	9 15	<b>19. 1</b> 3	4120.	0.835	57	0. 0011 0. 0026 0. 0065		0. B
•	1009: 1018: 1027:	275.		360.	417.	420.	383.	364.	301. 299. 221.	264.	
•	11.26:	13723.			30244.	1.7456.	6063.		1961. 294. 129.	179.	
•	1310:	138. 43.	279. 67.	51.8. 51.	900. 42.	1049. 61.	992.	538. 60.	66. 253. 67. 1. 000	84.	
•	PK IT			AREA					W CTS/	SEC	ZERR
•	) 4 1 5 1.	558. 563. 602. 645.	95 40 91 13 58 67	1032. 0492. 4120. 7768. 490.	1973. 1519. 1386. 897.	2. 64 1. 91 1. 88 1. 89 1. 81	1021, 77 1118, 24 1128, 16 1205, 43 1291, 55	1110 1110 1197	17 1. 720 32 6. 749 32 2. 235 17 1. 295 13 8. 172	E 01 E 02 E 01 E-01	9. 2 0. 5 0. 3 1. 3 9. 7
	6 1	656.	93 .	4296.	825.	1. 97	1314.06	1307	15 7, 160	E 00	1.8

\*\*\*\* 14 JAN 1980 9:41:12 AM \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 4:4:4:4:4:4:4:4:4:4:4:4:

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02230

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5228.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 11JAN80 1611:02 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* MBR ITERATIONS: 10.

\*

DETECTOR: GEL1-8

\* LIBRARY: NUCL LIB1 DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE:

2. 000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

656, 92

665.41

1

2421.

150.

585.

357.

•	ELEMEN'	'l'	PEAH ENER(		GND 	HREA	CONCE	NTR.	1 SIGMA ERROR	ZER	ROR
•	X-AMIII	MONY	563.	9	654.	74000.	Ø. 72:	<b>9</b> 6	0. 0013 0. 0029 0. 0066		0.4
•	1009: 1018: 1027:	1.52.	1.83		. 248	. 226.	235.	124. 211. 126.		167.	
•	1117:	7257.	13972	2. <mark>18641</mark>	. 16946	. 9666.		743.	1040. 135. 60.	85.	
•	1310:	67. 24.	159 21	9. 303 3. 26	. 493 . 36	. 620. . 19.	528.	318. 30.	48. 123. 29.	46.	
•	PK IT				BKGND				W CTS/	SEC	%ERR
•	4 1	558. 563. 602.	96 :	709. 22774. 74000. 4313.	849. 654.	1. 91 1. 86	1022. 11 1118. 25 1128. 19 1205. 42	11.07 1107	16 1.182 32 3.796 32 1.233 19 7.188	E 01 E 02	9. 7 0. 7 0. 4 1. 8
	5 1			294.	480.	1. 94	1291. 64	1285	15 4.903	E-01 1	L2. Ø

1.. 96

1.96

1314.02 1305

1330.99 1325

20 4.035E 00

12 2.492F-01 19.7

91119065 QY,RF FIFTH IRRADIATION PART TWO

| SAMPLE DATE: 10JAN80 1146:00 | SAMPLE IDENTIFICATION: Q223R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6434.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 11JAN80 1621:28 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR IJERATIONS: 10.

:1:

:1:

DETECTOR: GELI-8 \* LIBRARY: NUCL.. LIB1

DATE CALIBRATED: 260C179 1434:06 \* FMERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

#### UNKNOWN SAMPLE REPORT

1

665, 40

327.

656.

2.90

1330.98 1323

21 5. 453E-01 12. 4

•	ELEMENT	r 	PI ENI	EAK ERGY	BKG	ND 	ARI	ΞA 	CON	ICE.h	ITE.	1 S EF	GIGMA ROR	%E	RROR
•	%-COPPE %-ANTII %-ARSEI	YMOP'	5	63. 9	E	25.	977	28.	Ø.	774	17	Ø.	0028		8. 3 0. 4 3. 1
•		<sup>†</sup> 248.	;	268.	192. 271. 190.	29(	5.	313.	28	<u> 9.</u>			209.	1.90	
•	1126:	9851	18	326.	6821. 24560. 78.	2211	ð. 1:	2778.	443	XX.	852			112	•
•	1310: 1319:	81 46.	;	208. 48.	42. 404. 38. E-UP (	65) 3)	8. 9.	834. 40.	74 3	₩. 33.	376 36	•	1.81. 51.	91 49	
					REA										ZERR
•	3 2 4 1 5 1	558. 563. 602.	98 92 57 64	29: 97: 5:	933. 548. 728. 535. 115. 241.	1055, 825, 1097, 664,	. 1. . 1 . 1	. 92	1.1.18. 1.1.28. 1.2.95. 1.2.91.	29 17 42 48	1107 1107 1195	33 33 21 15	1. 555 4. 925 1. 629 9. 393 6. 917 5. 403	3E 01 9E 02 2E 00 7E-01	8.3 0.6 0.3 1.6 10.1 2.1

91119065 QY,RF FIFTH IRRADIATION PART TWO

| SAMPLE DATE: 10JAN80 1146:00 | SAMPLE IDENTIFICATION: 0223S

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5488.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. 1AB1

:+:

ACQUISITION DATE: 11JAN80 1631:57 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 17ERATIONS: 10.

:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

#### UNKNOWN SAMPLE REPORT

656, 94

665.45

2686.

225.

223.

309.

•	ELEMEN	T	PEAI ENER(		GMD	AREA	CONCE	NTR.	1. SIGMA ERROR	XERROR	:
•	X-HWTI	MONY	563.	9	709.	82860.	0. 77:	15	0. 9039	11. 4 0. 4 3. 1	
•	1009: 1018: 1027:	172.	20:	L. 216	. 243	. 261.	234.	224.	156. 195. 127.	1.79.	
•	1126:	8323.	15510	). 20592	. 18752	. 11036.	582. 3699. 52.	780.	1188. 137. 58.	83.	
•	1301: 1310: 1319:	45.	4.	4. 36	. 30	. 28.	33.	36.	51. 145. 45. 1. 000	38.	
•	РК ІТ			AREA					°W CTS∕		:R
•	4 1	558. 563. 602.	96 : 93 : 59	629. 24814. 32860. 4941.	930. 709. 930.	1.90 1.88 1.90	1022. 10 1118. 25 1128. 18 1205. 45	1107 1107 1195	34 4.136 34 1.381 22 8.235	E 02 0.4 E 00 1.7	; ; ;
		645.		330.	462.	1. 92	1291. 52	LEOD	u.z	E-01 10.7	

1.99

2. 69

1314.06 1303

1331.07 1303

34 4.477E 00

34 3.749F-01 12.9

91119065 QY/RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02237

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6464.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF.TAB1

:+:

ACQUISITION DATE: 11JAN80 1642:28 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR JTERATIONS: 10.

:

DETECTOR: GEL1-8

8 \* L1BRARY:NUCL.L1B1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:1:

### UNKNOWN SAMPLE REPORT

1

1

656, 97

665. 22

2837.

267.

711.

476.

ELEMENT		PEAK NERGY	BKGN	4D 6	AREA	CONCEN		1 SIGMA ERROR	ZER	ROR
%-COPPER %-ANTIMO %-ARSEN:	₹ ЭМҰ [C	510. 6 563. 9 657. 0	253 85 71	32. 37. 89 11. 3	777. 9114. 2837.	0. 012 0. 705 0. 187	(0 18 77	0. 0012 0. 0026 0. 0061		9. 9 0. 4 3. 3
1018:	181	241.	255.	164. 269. 143.	282.	272.	220.	169. 212. 158.	178.	
1126: 9	9095. 1	.6719. 2	22387.	20056.	11878.		876.	1202. 165. 81.	80.	
1340:	93. 37.	190. 33.	334. 34.	557. 38.	712. 28.	645. 30.	401. 40.	61. 154. 29. 1. 000	72.	
• PK IT								'W С:ТS/	SEC:	%ERR
3 2	558. 97 563. 92	991:	22. 14.	1079.	1.88	1021.70 1118.28 1128.18 1205.47	1108 1108	16 1.295 34 4.654 34 1.485 19 8.982	E 01. E 02	9.8 0.6 0.3 1.6
	645. 94	4 3:	38.		2. 21	1292. 08		20 6. 461		

1. 99

2.40

1314.12 1305

1330.62 1324

18 4.728F 00

14 4.446E-01 13.1

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 4863.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TAB1

\*

.+:

ACQUISITION DATE: 11JAN80 1652:58 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 698. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:

ر سور دو معرور مورس رسمور و معرور و معرور و معرور و معرور و معرور معرور و معرور و معرور و معرور و معرور و

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

### UNKNOWN SAMPLE REPORT

1

665.21

1194.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENT		1 SIGMA ERROR	%ERROR
%-COPPER %-ANTIMONY %-ARSENIC	563. 9	7871. 5:	13703.	5. 4187	i	0. 0114	0. 2
	1.068. 10 1086. 11 991. 10	18.     1146.	1145.	1104.		1007.	1023.
_ 1126:57617.	40577. 361 101069.1282 1312. 11	93. <mark>111</mark> 348.	62549.	21668.		2175.	1662.
<ul><li>1310: 704.</li><li>1319: 398.</li></ul>	435. 4 1302. 23 357. 3 PULSE-PILE-U	48. 3778. 36. 348.	. 4436. . 364.	3757. 412.	2314. 353.	994. 339.	492.
	RGY AREA			*			'SEC %FRR
<ul> <li>1 2 558.</li> <li>2 2 563.</li> <li>3 1 602.</li> <li>4 1 638.</li> <li>5 1 645.</li> <li>6 1 656.</li> </ul>	87 513703. 51 27189. 20 384. 68 1854.	8156. 7871. 9597. 4587. 5226. 7119.	2. 02	1118, 15 1 1128, 06 1 1205, 30 1 1276, 62 1 1291, 56 1 1313, 96 1	.107 : .196 : .273 :	33 8.562 17 4.532 11 6.408	E 02 0.1 E 01 0.8 E-01 25.4 E 00 6.0

2. 48

1330.58 1326

11 1.989E 00

3770.

\* \*\*\*\* 14 JAN 1980 9:47:18 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: Q224B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8218.000 UG UNITS:

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

ACQUISITION DATE: 11JAN80 1704:48 \* FWHM(1332) 2, 390 PRESET TIME(L1VE): 600. SEC \* SEMSITIVITY: 5.000 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:‡:

\*

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV 0.5003803 KEY/CHML: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV

\* ABUNDANCE LIMIT: 85. 00%

#### UNKNOWN SAMPLE REPORT

1

1

656, 97

665.41

4858.

264.

1316.

1272.

ELEMENT	PEAK ENFRGY`	BKGND	ARE	:H	CONCEN		1 SIGMA ERROR	XEF	ROR
%-COPPER  %-ANTIMONY %-ARSENIC	564. Ø	1.591.	15861	E.	Ø. 992	0	0. 0029		0. B
1009: 305 1018: 320 1027: 305	. 353.	287. 442. 268.	454.	439.	434.		336.	300.	
1117: 8617 1126:15084 1135: 170	. 28951. 3	(9799. <u>3</u> 6		.988.	1180. 7862. 157.		352.	5812. 210. 168.	
1319: 71	. 63. . 272. . 76. PULSE—PILF	587. 1 87.	015. 1 67.	.340. 78.	1104. 80.	712. 69.	300. 62.		
•	RGY ARE				CORRECT HANNEL		т. 000 W CTS/	SEC	ZERR
	. 62 899 . 69 60	L5. 19 L6. 15 02. 19 07. 11	445. 1. .68. 2.	88 13 86 13 88 13	021. 69 118. 35 128. 25 205. 51 291. 58	1107 1107 1195 1283	16 1.984 35 8.136 35 2.644 20 1.484 16 1.012	E 00 E 01 E 01	8.3 0.5 0.3 1.3 8.9

1.86

1.97

1314.12 1306

1330.99 1323

1.6 8.097E 00

16 4.401E-01 20.1

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8397.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:+:

ACQUISITION DATE: 11JAN80 1715:31 \* FWHM(1332) 2 390
PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000
ELAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\_\_\_\_

DETECTOR: GELI-8 \* LIBRARY: NUCL, LIB1

:+:

### UNKNOWN SAMPLE REPORT

665. 19

590.

1986.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-ANTIMONY	564. Ø	3643. 3	299361.	0. 0163 1. 8360 0. 4951	0. 0044	Ø. 2
1018: 643	658.	601. 564 707. 763 573. 564	2. 753.	555. 61 739. 76 530. 56	51 649.	605.
1117:16795 1126:28966 1135: 556	55042. 7	2554. 14123 4988. 69453 483. 454	2. 41260.	2367. 203 14727. 346 1381. 43	52. 963.	11315. 655. 466.
• 1310: 306 1319: 169	. 606. . 1.69.	1187. 1963 165. 159	8. 2493. 9. 161.	188. 17 2252. 140 167. 14 CORRECTION	90. 589. 12. 144.	287.
PK IT ENE			<b>Г</b> ЫНМ	CHANNEL LEFT		/SEC MERR
1 1 510 2 2 558 3 2 563 4 1 602 5 1 645	.99 9400 .95 29936 .63 1730	7. 4107. 1. 3643. 2. 3974.	1. 89 1. 87 1. 87	1022, 13 1014 1118, 32 1107 1128, 23 1107 1205, 53 1196 1291, 75 1285	7 35 1.56 7 35 4.98 5 17 2.88	7F 02 0.3 9E 02 0.2 4E 01 0.9
6 1 656				1314.13 1307	- , ,	

1.. 99

1330.55 1326

12 9.841E-01 11.4

91119065 QY/RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7322.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:†:

ACQUISITION DATE: 11JAN80 1726:41 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+

:1:

DETECTOR: GELI-8 \* LIBRARY: NUCL\_LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FNERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

### UNKNOWN SAMPLE REPORT

665.29

148.

662.

2.28

1330.75 1324

14 2.469E-01 25.9

1

•	ELEMEN	1000 1000 1000 1000 1000 1000 1000	PEAK ENERG		GND	AREA	CONCE		1 SIGMA ERROR	Z.F.F.	ROR
•	ITMA-K	MONY	564.	8 2 0 :	944. 9	96651.	Ø. 683	L1	0. 0011 0. 0024 0. 0059		8. 3 Ø. 4 3. 2
•	1009: 1019: 1027:	204.	196 238 189		305.		320.	262.	230.	217.	
•	1117: 1126: 1135:		17207	). 7270 '. 24234 ). 89	22781.	1.3652.		977.	1145. 174. 78.		
•	1301: 1310: 1319:	92. 42.	176 36	l 376 l 37	. 616. 43.	71.7. 37.	761.	437. 33.	51. 179. 44.	79. 33.	
•	PK IT			AREA					1.000 W CTS/		ZERR
	5 1	559.	01. 3 97 9 65 67	937. 9918. 96651. 5856. 440. 3146.	1216. 944. 2460.	1.83	1022. 09 1118. 36 1128. 28 1205. 58 1291. 55 1314. 18	1108 1108 1194 1286	15 1. 562 34 4. 986 34 1. 611 41 9. 768 12 7. 333 19 5. 243	6E 01 E 02 BE 00 8E-01	8. 2 0. 6 0. 3 1. 8 8. 9 2.

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7770.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

4:

### ACQUISITION DATE: 11JAN80 1737:11 \* FWHM(1332) 2.390
| PRESET TIME(LIVE): 600. SEC \* SEMSITIVITY: 5.000
| ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %
| ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+:

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:+:

DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

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\*

### UNKNOWN SAMPLE REPORT

1.

665, 36

193.

585.

2. 07

1330.89 1326

12 3.215F-01 19.1

ELEMENT		PEAK NERGY	PKGND	fi	REA	CONCE	ITR.	1 SIGMA ERROR	%ER	:ROR
OMITIMA-X 🔵	M'r' !	564. 0	936.	105	845.	9. 704	12	0. 0011 0. 0024 0. 0058		9. 3 0. 3 3. 2
1018:	184. 223. 205.	256.	307.	287.	187. 361. 186.	326.	205. 280. 177.	180. 241. 174.	221. 190. 185.	
1117: 5 1126: 9	1632. <b>1</b> :	9108. 26	i885. 24	978.	14802.	753. 5121. 98.	1072.	238.	118.	
• 1310: 1319:	75. 41.	1.94. 42.	349. 42.	656. 53.	823. 32.	802. 54.	466. 47.	52. 183. 47. 1. 000	76.	
6		AREF						1.000 W C:TS/9	SEC:	%ERR
2 2 3 2 • 4 1	510. 72 559. 00 563. 97 602. 63	31980 105845	l. 11 i. S	.78. 936.	1. 87 1. 84	1021.85 1118.33 1128.26 1205.52	1107 1107	17 1.5216 33 5.3306 33 1.7646 22 1.0236	E 01 E 02	9. 2 0. 6 0. 3 1. 5
5 1 6 1	645. 95 657. 01	387	'. 8	78.		1292. 10 1314. 20	1280	18 6. 450E 19 5. 383E	E-01 1	

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLF IDENTIFICATION: 0224F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8343.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*

:1:

ACQUISITION DATE: 11JAN80 1747:41 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 624. SFC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:+

:+:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

\* HALF LIFE RATIO: 8.00

KEV \* ARUNDANCE LIMIT: 05.000

-0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

#### UNKNOWN SAMPLE REPORT

1.

665. 64

354.

748.

4.08

1331.45 1325 13 5.903E-01 12.1

OFFSET:

•	ELEMENT		PEAK :NERGY	BKG:	ND 1	AREA	CONCE		1 SIGMA ERROR	%EF	ROR
•	%-COPPER %-ANTIMO %-ARSENI	'l'T'	564. 0	12	<b>4</b> 5. <b>1</b> 3:	3969.	0.831	L6			8. 4 0. 3 3. 0
•		280. 277. 236.			388.			359.	287.		
•	1117: 7: 1126:12 1135:	456. 3	24230.	33904.	34.585.	18623.	924. 6397. 118.	1300.	1755. 302. 138.		
•	) 1310: : 1319:	1.1.3. 80.	223. 51.	450. 58.	847. 65.	1035. 53.	1022. 56.	612. 55.	86. 250. 44. 1. 000	98.	
	PK IT								w crs/	SEC:	ZERR
•	2 2 3 2 4 1 5 1	559. 00 563. 90 602. 63	3 40. 5 1339 2 80 1 :	032. 547.	1.599. 1245. 1554.		1022, 02 1118, 33 1128, 26 1205, 51 1291, 63 1314, 21	1107 1107 1194 1283	18 1.910 30 6.742 30 2.233 21 1.339 19 9.121 17 6.907	E 01 E 02 E 01 E-01	8.3 0.5 0.3 1.3 9.7 1.9

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLF DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224G

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7065,000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*

:4:

ACQUISITION DATE: 11JAN80 1758:19 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SFC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:

DETECTOR: GEL1-8

EL1-8 \* L1BRARY:NUCL.L1B1

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

#### UNKNOWN SAMPLE REPORT

1

1

657. 01

665.45

3048.

176.

548.

494.

•	ELEME	TM3	**		'EAK IERGY	BKG	iND	AREA	CONCE	VTR.	1 SIGMA ERROR		ROR
	Z-ANI	Tþ.	ION'Y	E	564. 0	٤	174.       1(	00323.	0.73	58	0. 0012 0. 0026 0. 0060		0. 4
•	1018 1027 1117 1126 1135		210. 221. 5218. 9237. 87.	7 18	247. 190. 7316. 3148. 96.	253. 167. 7165. 25253. 80.	283. 157. 4401. 23912. 74.	294. 173. 1773. 13962. 79.	323. 155. 706. 4889. 84.	260. 165. 603. 1030. 79.	191. 238. 156. 1294. 193. 79.	186. 156. 3559. 107. 77.	
•	1316 1319	1: ):	87. 41. F	PLIL_S	152. 39. E-PII	, 338. 29. E-UP C	579. 30. ORRECTI	787. 38. 3D DATA.	702. 35. CORREC	456. 37. TiloN =	159. 33. 1 000	67. 34.	
•	1 2 3 4	1 2 2	510.	80 00 97	291 1001	974. 267. 323.	2564. 1138. 874. 776.	3. 15 1. 86 1. 84	1022. 02 1118. 35 1128. 27	1015 1107 1107	°W CTS/ 16 1.624 33 4.878 33 1.672 16 9.887	E 00 E 01 E 02	Ø. 6
-	5		645.			318.	850.	2. 05	1291 81		17 5. 305		

1. 92

2. 25

1314, 21 1306

1331.08 1325

16 5.080E 00

13 2.937F-01 19.4

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: Q224H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8409.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TAB1

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:+:

ACQUISITION DATE: 11JAN80 1808:49 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:†:

### UNKMOWN SAMPLE REPORT

1

665.13

ELEMENT	PEAK ENERGY	EKGNE	'i	HREA	CONCER		1 SIGMA ERROR	ZEF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	564. Ø	1.520	1. 1.I	7680.	Ø. 851		0. 0027		
1009: 264 1018: 278 1027: 296	. 276.	249. 307. 240.	418.		394.	349.	278.		
1117: 7529 1126:13087 1135: 159	. 25190.	34629.	32571.	18857.	985. 661.6. 122.	1467.	323.		
<pre>1310: 108 1319: 67</pre>	. 84. . 239. . 72. PULSE-P1L	511. 43.	889. 59.	1136. 66.	1025. 56.	584. 63.	279. 54.	92.	
PK IT ENE							W CTS/	SEC	ZERR
2 2 558 3 2 563 • 4 1 602		804. : 80. : 844. :	L520. L335.	3. 27 1. 85 1. 85 1. 86 2.66	1022, 13 1118, 32 1128, 25 1205, 50 1291, 69	1110 1110 1197	15 1. 741 31 6. 884 31 2. 295 17 1. 374 37 1. 283	E 01 E 02 E 01	8.8 0.5 0.3 1.3 5.4
6 3 656	. 97 44			1. 91	1314. 13		37 7.360		1. 6

990.

246.

1.. 93

1330.44 1324

15 4.106E-01 19.2

\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\* 14 JAN 1980 9:55:44 AM \*\*\*\*\* **\***\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02241

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6837.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE MAME: EFF. TAB1

ACQUISITION DATE: 11JAN80 1819:27 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC: \* NBR ITERATIONS: 10.

\*

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHML:

0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 99%

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
🛡 %-ANTIMONY	564. Ø	925.	97178.	0. 0130 0. 7403 0. 1931	0. 0027	Ø. 4
	180. 223. 199.	256. 2		288. 27	5. 162. 4. 218. 3. 149.	188.
1126: 9060.	1.7519. 2	4119. 228	104. 1.3854.	712. 61 4691. 102 72. 8	8. 181.	109.
1310: 74. 1319: 39.	154.	342. 5 37.	7 <i>6</i> . 767. 39. 39.	45. 4 746. 39 45. 3 CORRECTION	9. 1.68. 6. 36.	71.
PK IT ENE	RGY ARE	A BKGN	ID FWHM	CHANNEL LEFT	PW CTS/:	SEC XERR
• 1 1 510.			4. 2.60	1022.05 1015	18 1. 354	E 00 10.1

1 1 510.82 813. 2984. 2.60 1022.05 1015 18 1.354E 00 10.1 2 2 559.01 28694. 1282. 1.86 1118.37 1110 29 4.782E 01 0.6 3 2 563.97 97178. 925. 1.86 1128.27 1110 29 1.620F 02 0.3 4 1 602.63 5552. 804. 1.83 1205.54 1198 16 9.254F 00 1.5 5 1 645.91 429. 712. 2.18 1292.03 1285 16 7.149E-01 10.0 6 1 657.00 2959. 819. 1.86 1314.19 1303 21 4.932E 00 2.3 7 1.665.43 125. 620. 1.93 1331.04 1324 14 2.091E-01 29.4		1.17	х і	CHERUT	nsen	DIVIDIAD	r Mulli	CHAMMEL LEF	L.M	いしつくつにい	AERK
3 2 563.97 97178. 925. 1.86 1128.27 1110 29 1.620F 02 0.3 4 1 602.63 5552. 804. 1.83 1205.54 1198 16 9.254F 00 1.5 5 1 645.91 429. 712. 2.18 1292.03 1285 16 7.149E-01 10.0 6 1 657.00 2959. 819. 1.86 1314.19 1303 21 4.932E 00 2.3	•	1	1.	510.82	813.	2984.	2. 60	1022.05 101	5 18	1. 354E 00	10. 1
4       1       602.63       5552.       804.       1.83       1205.54       1198       16       9.254F       00       1.5         5       1       645.91       429.       712.       2.18       1292.03       1285       16       7.149E-01       10.0         6       1       657.00       2959.       819.       1.86       1314.19       1303       21       4.932E       00       2.3		2	2	559. 01	28694.	1282.	1.86	1118.37 111	9 29	4. 782E 01	0.6
5 1 645.91    429.    712.   2.18  1292.03 1285  16 7.149E-01 10.0 6 1 657.00    2959.    819.   1.86  1314.19 1303  21 4.932E 00 2.3		3	2	563. 97	97178.	925.	1.86	1128, 27 111	9 29	1.620F 02	0.3
6 1 657.00 2959. 819. 1.86 1314.19 1303 21 4.932E 00 2.3		4	j.	602. 63	5552.	804.	1.83	1205.54 119	3 16	9.254E 00	1.5
The second secon		5	1.	645. 91	429.	712.	2.18	1292.03 128	5 16	7. 149E-01	10.0
🗦 7 1. 665.43 125. 620. 1.93 1331.04 1324 14 2.091E-01 29.4		6	1	657. 00	2959.	819.	1.86	1314, 19 130	3 21	4. 932E 00	2. 3
		1000	1.	665. 43	125.	620.	1.93	1331.04 132	1 14	2. 091E-01	29. 4

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8286,000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

+

ACQUISITION DATE: 11JAN80 1829:58 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR JTERATIONS: 10.

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L184

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

665, 20

242.

509.

2.10

1330.58 1326

11 4.028E-01 14.7

ELEMENT	PEAK ENERGY	BKGNI	)	AREA	CONCE	JTR.	1 SIGMA ERROR	XEF	ROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 0	1.10	5. <b>11</b>	9804.	0. 754	14	0. 0025		8. 3 0. 3 3. 0
1009: 235 1018: 263 1027: 203		280.	356.	364.	344.	345.		210.	
1117: 6160 1126:11116 1135: 133	i. 21969.	30215.	28272.	16556.	5795.	1186.	247.	135.	
1301: 51 1310: 111 1319: 48	. 210. 3. 45.	414. 45.	749. 46.	922. 44.	832. 49.	551. 47.	208. 40.	68. 51.	
PK IT ENE									%E.RR
2 2 559 3 2 563 4 1 603		)66. 304. 391.	1383. 1106. 1872.	1. 84 1. 86	1118.34 1128.25 1205.53	1107 1107 1198	12 1. 574 34 5. 844 34 1. 997 26 1. 165	E 01 E 02 E 01	8. 2 0. 6 0. 3 1. 5
5 1 64° 6 1 656	5. 75	014. 748.	672.	د. 34 1. 99	1291. 70 1314. 15		14 8.569 16 6.246		8. 6 1 9

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: Q224K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8086,000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF.TAB1

:4:

ACQUISITION DATE: 1.1.JAN80 1840:32 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**>** 

DETECTOR: GEL1-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY \OLLRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: −0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

\*

ELEMEN	T	PEAK ENERGY	BKG	ND 	AREA	CONCEN	ΛT R.	1 SIGMA ERROR	%ERI	ROR
%-COPPER %-ANTIMONY %-ARSENIC 1009: 337		511. 0 564. 0 657. 0	Ø 1.896. 1		866. 1917. 5602.	0. 011 1. 176 0. 312		0. 0014 0. 0033 0. 0088	1	2. 0 0. 3 2. 8
1009: 1018: 1027:	337. 354. 340.	360. 379. 336.	349. 399. 311.	320. 454. 319.	351. 495. 31.2.	312. 484. 331.		413.	348. 361. 276.	
	9854. 171.42. 21.3.	13886. 33481. 231.	1.3414. 45615. 202.	8307. 42718. 205.		1305. 8826. 203.	1215. 1937. 176.	424.	671.8. 277. 1.99.	
1301:   1310:   1319:	102. 152. 88.	81. 307. 94.	101. 651. 83.	71.	1487. 85.	89. 1320. 93.	1.02. 788. 83.	365. 83.	105. 129. 111.	
	88. F	94. 'ULSE-P11	83. LE-UP C	71.	85. D DATA.		83.  -   NOI	83. 1. 000	111	

	FK.	11	EMERLIT'	HKEH	BKGMD	FWHM	CHAMMEL	LEFT	PМ	CTS/SEC	XERR
		1.	511 88	866.	4913.	2. 53	1022. 42			1. 444E 00	
		2	559. 99 563. 96	55375. 181917.	2284. 1896.		1118.34 1128.24			9. 229E 01	-u/ • •
		1		10760.	1056. 2667.		1128. 24			3.032E 02 1.793E 01	
	_	1	645. 67	728.	1388.		1291. 54			1.213E 00	8. 1.
•	_	1	656. 98 665. 23	5602. 360.	1388. 1151.		1314. 1.4 1330. 64			9.336E 00 5.997E-01	

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7003.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*\*\*\*\*

:4:

ACQUISITION DATE: 11JAN80 1851:18 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSFD REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %
FLAPSFD LIVE TIME: 600 SEC \* MED ITELESTICAL: 40

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB4

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

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6

1

1

1.

645. 72

657.00

665, 25

375.

242.

3098.

537.

703.

338.

ELEMENT	PEAK ENERGY	BKGND	ÄKEA	CONCENTR.	1 SIGMA ERROR	ZERROR
₩ %-AMTIMONY	51.0. 6 564. 0 657. 0	1029. 9	7152.	0. 0112 0. 7266 0. 2002	0. 0026	0.4
	. 245.		302.	187. 17 274. 24 159. 16		190.
1126: 8939	9. <mark>17544. 2</mark> 4	549. 22804.	13882.	657. 61 4659. 97 70. 7	4. 192.	108.
● 1310: 8: 1319: 3;	3. 172. 7. 34.	323. 619. 35. 30.	804. 34.	47. 3 686. 46 30. 3 CORRECTION	9. 180. 5. 28.	71.
PK IT EN	ERGY AREF	BKGMD	FЫНМ	CHANNEL LEFT	PW CTS/	SEC %ERR
1 1 510 2 2 559 3 2 569 4 1 609	9.03 28785 3.97 97152	9. 2496. 5. 1219. 2. 1029. 3. 888.	1.86	1021, 55 1015 1118, 39 1107 1128, 27 1107 1205, 54 1198	' 47 4.797 ' 47 1.619	E 02 0.3

1.87

1.93

2.40

1291.64 1286

1314.18 1305

1330.68 1326

12 6.245E-01 10.2

10 4.039E-01 12.5

19 5.163E 00

\*\*\*\*\*\*\*\*\*\*\*\*\* 14 JAN 1980 10:00:35 AM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6525, 000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. THB1

\*\*\*\*\*\*\*\*\*\*\*

ACQUISITION DATE: 11JAN80 1901:48 \* FWHM(1332) 2.390 PRESET TIME(LIVE): \* SENSITIVITY: 600. SEC 5.000 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 10.

600. SEC \* MBR ITERATIONS:

DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* FMERGY TOLERANCE: 2. 000KV 0.5003803 KEV/CHNL: \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

1

665, 28

221.

595.

PEAK ENERGY	BKGND	HREA	CONCENTR.		
510. 7 564. 0 657. 0	3045. 973. 936.	547. 114291. 3444.	0. 0095 0. 9191 0. 2399	0. 001.4 0. 0031 · 0. 0075	14. 9 0. 3 3. 1
i. 228.	285. 28	4. 306.	295. 26	6. 232.	226.
. 20383. 2	8363. 2704	8. 1.6537.	5736. 122	8. 209.	131.
: 190. : 50.	366. 71 46. 4	8. 854. 6. 48.	846. 50 38. 5	2. 235. 3. 47.	85.
					SEC MERR
V.02 3341 199 11429 164 652 182 42	0. 1269 1. 973 8. 1573 8. 1150	. 1.88 . 1.86 . 1.82 . 1.99	1118.37 1108 1128.30 1108 1205.56 1194 1291.84 1284	30 5.568 30 1.905 26 1.088 21 7.131	E-01 14.9 E 01 0.6 E 02 0.3 E 01 1.5 E-01 12.2 E 00 2.1
	ENFRGY 510.7 564.0 657.0 7. 184. 6. 228. 7. 207. 6. 8184. 7. 20383. 2 7. 100.	ENERGY BKGND  510.7 3045. 564.0 973. 657.0 936.  184. 188. 23 228. 285. 28 207. 208. 20 3. 8184. 8231. 506 20383. 28363. 2704 3. 100. 93. 10 3. 100. 93. 10 3. 190. 366. 71 50. 46. 4 PULSE-PILE-UP CORREC ERGY AREA BKGND 3.69 547. 3045 4.02 33410. 1269 3.99 114291. 973 4.64 6528. 1573 5.82 428. 1150	ENFRGY BKGND AREA  510.7 3045. 547. 564.0 973. 114291. 657.0 936. 3444.  7. 184. 188. 230. 185. 8. 228. 285. 284. 306. 9. 207. 208. 203. 210. 8. 20383. 28363. 27048. 16537. 9. 100. 93. 105. 92. 8. 38. 44. 68. 46. 9. 190. 366. 718. 854. 50. 46. 46. 48. PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.  ERGY AREA BKGND FWHM  PULSE-PILE-UP CORRECTED DATA.	ENERGY BKGND AREA CONCENTR.  510.7 3045. 547. 0.0095 564.0 973. 114291. 0.9191 657.0 936. 3444. 0.2399  7. 184. 188. 230. 185. 212. 21 8. 228. 285. 284. 306. 295. 26 8. 207. 208. 203. 210. 179. 19 9. 8184. 8231. 5068. 2148. 823. 64 8. 20383. 28363. 27048. 16537. 5736. 122 9. 100. 93. 105. 92. 105. 9 8. 38. 44. 68. 46. 49. 5 8. 190. 366. 718. 854. 846. 50 9. 190. 366. 718. 854. 846. 50 9. 50. 46. 46. 48. 38. 5 PULSE-PILE-UP CORRECTED DATA. CORRECTION ERGY AREA BKGND FWHM CHANNEL LEFT  0.69 547. 3045. 2.54 1021.79 1014 8.02 33410. 1269. 1.88 1118.37 1108 8.99 114291. 973. 1.86 1128.30 1108	ENERGY BKGND AREA CONCENTR. ERROR  510. 7 3045. 547. 0.0095 0.0014 564. 0 973. 114291. 0.9191 0.0031. 657. 0 936. 3444. 0.2399 0.0075  7. 184. 188. 230. 185. 212. 217. 199. 6. 228. 285. 284. 306. 295. 266. 232. 8. 207. 208. 203. 210. 179. 191. 182. 9. 8184. 8231. 5068. 2148. 823. 646. 1417. 9. 20383. 28363. 27048. 16537. 5736. 1228. 209. 9. 100. 93. 105. 92. 105. 98. 106. 9. 38. 44. 68. 46. 49. 56. 64. 9. 190. 366. 718. 854. 846. 502. 235. 9. 50. 46. 46. 48. 38. 53. 47.  PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000  ERGY AREA BKGND FWHM CHANNEL LEFT PW CTS/ 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111 9. 69 547. 3045. 2.54 1021. 79 1014 15 9.111

2.34

1330.74 1324

13 3.691E-01 17.0

\*\*\*\*\* 14 JAN 1980 10:01:47 AM \*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

9111.9065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224N

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7827.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

ACQUISITION DATE: 11JAN80 1912:22 \* FWHM(1332) 2, 390 PRESET TIME(LIVE): 600. SEC 5.000 \* SEMSITIVITY: ELAPSED REAL TIME: 624. SEC \* SHRPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC 10.

\* NER ITERATIONS:

DETECTOR: GEL 1-8 \* LIBRARY: NUCL LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2. 000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00%

### UNKNOWN SAMPLE REPORT

1

665, 22

198.

714.

2.11 1330.61 1326 12 3.294E-01 20.4

ELEMENT	PEAK ENERGY	BKGMD	AREA	CONCENTE	1 S	(IGMA ROR	XERROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 0	1487. 1	.32828.	0.8922	Ø.	0028	0. B
• 1009: 235. 1018: 240. 1027: 222.	287.	301. 372	2. 353.	372.	373.	297.	
1117: 6923. 1126:11894. 1135: 148.	23493. 3:	3070. 32044	l. 19199.	6865. S	L508.		153.
1301: 66. 1310: 114. 1319: 50.	214. 44.	448. 817	7. 1.087 <i>.</i> 5. 78.	982. , 43.	606. 42.	288. 55.	100.
PK IT ENER							EC WERR
2 2 559. 3 2 563. • 4 1 602.	03 3984 99 13282 65 765	0. 3003. 5. 1954. 8. 1487. 2. 1759.	1., 85 1. 84 1. 81	1022. 49 10 1118. 40 1: 1128. 31 1: 1205. 57 1:	110 30 110 30 197 21	6. 641E 2. 214E 1. 275E	01 0.5 02 0.3 01 1.4
6 1 657.		4. 904. 5. 788.	1. 90	1291.40 1: 1314.22 1:	307 14	6. 924E	-01 10 1 00 1 8

9111.9065 QY, RF FIFTH IRRADIATION PART 1WO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 02240

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6910.000 UNITS: UG

■ SAMPLE GEOMETRY: AFFRI 55 INCOREFFICIENCY FILE NAME: EFF. TAB1

:†:

ACQUISITION DATE: 11JAN80 1923:00 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 726. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR TERATIONS: 10.

:+

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LJB1

DATE CALIBRATED: 260CT79 1434:06 \* ENFRGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

## UNKNOWN SAMPLE REPORT

1

665. 17

1041.

•	ELEMENT	PEAK ENERGY	BKGND	AREA	CONCEN	TR.	SIGMA ERROR	ZER	30R
•	%-COPPER %-ANTIMONY %-ARSENIC	563. 9	10627.	634785.	4. 839:	3	0. 0097	Ę	ð. 2
•	1009: 1452. 1018: 1337. 1027: 1281.	1347.	1424.	L448. 1431	1451.	1395.	1347. 1333. 1279.	1.360.	
•	1117:36118. 1126:69281. 1135: 2221.	123424. 1	57289. <b>1</b> 39	9352. 79631	28972.	7903.	11123. : 3268. 1513.		
•	) 1310: 968. 1319: 590.	1.495. 579.	2773. 4 507.	506. 554 4400. 5046 505. 514 RECTED DATA	). 4554. · 516.	2783. 510.	1377. 519.	722.	
•	PK IT ENE				CHANNEL I			SEC :	ZERR
•	) 1 2 558. 2 2 563.	88 6347	85. 100		1118.18 : 1128.10 :	1107 3	5 3. 1006 5 1. 0586		2. 2 2. 1.
•		64 24 91 <u>1.</u> 95	47. 86	536. 2.12	1205.39 : 1291.48 : 1314.01 :	1284 1	7 6.1908 5 4.0788 8 3.2518	E 00 :	3. 7 5. 7 1 0

1.93

1.330, 52 1326

11 1.735E 00 10.7

5706.

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6541.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:+:

ACQUISITION DATE: 11JAN80 1935:18 \* FWHM(1332) 2.390
PRESET TIME(13VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:†:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L1B1

OFFSET: -0.5932283 KEV \* ABUNDANCF LIMIT: 85.00%

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## UNKNOWN SAMPLE REPORT

656, 98

665. 30

4

3434.

180.

359.

409.

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	XERROR
● %-ANTIMONY	564. 0	936.	1.1.2744.	0. 0105 0. 9098 0. 2422	0.0031	Ø. 3
1018: 205.	258.	291.		. 214. 2 . 309. 2 . 193. 1		201.
1126:10855.	20385. 2	:8300. 26	541 15313	. 794. 7 . 5241. 11 . 105.	22. 221.	132.
<ul><li>1310: 97.</li><li>1319: 42.</li></ul>	177. 54.	401. 41.	708. 921 48. 37	. 42. . 825. 4 . 41. . CORRECTION	77. 207. 34. 36.	75. 57.
PK IT EMET	GY ARE	A BKG	ND FWHM	CHRINNEL LEF	T PW CTS/	'SEC ZERR
1 1 510. 2 2 558. 3 2 563. 4 1 602. 5 1 645.	99 3316 96 11274 62 670	14. 9 17. 1.4	19. 1.86 36. 1.85 69. 1.81	1021. 94 101 1118. 31 110 1128. 24 110 1205. 50 119 1291. 80 128	)7 30 5.528 )7 30 1.879 )5 26 1.118	3F 01 0.6 9F 02 0.3 3E 01 1.5

1.85

2.07

1314, 14 1302 36 5, 723E 00

1330.77 1302 36 2.997E-01 17.6

SAMPLE QUANTITY: 6272,000
SAMPLE GEOMETRY: AFFRI 5S INCOR
EFFICIENCY FILE NAME: EFF. TAB1

+

UNITS:

UG

ACQUISITION DATE: 11JAN80 1945:52 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 712. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**·** 

:4:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L.1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: −0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

UNKNOWN SAMPLE REPORT

1.

665, 24

947.

4909.

•	ELEMENT	PEAK ENERGY	BKGN	ID f	HREH	CONCEN	ITR.	1 SIGMA ERROR	ZERROR	
•	%-COPPER %-ANTIMONY %-ARSFNIC	511. 0 563. 9 656. 9	1584 903 718	13. :5. 56: 14. 11	0. < 3815. 7648.	: 0. 011 4. 754 1. 304	.1. 15 16	NOT DET 0. 0098 0. 0329	ECTABLE 0. 2 2. 5	
•	1009: 126: 1018: 122: 1027: 115	7. 1282.	1215. 1177. 1144.	1283.	1.209. 1326. 1090.	1239.		1189.	1214.	
•	1117:3249; 1126:6073; 1135: 173	3. 109514.	141121. 1	.24537.	71044.	4593. 25445. 1273.	6748.	2674.	1965.	
•	1301: 46 1310: 77; 1319: 45	7. 491. 2. 1309. 3. 466. PULSE-PI	2444. 448.	3955. 432.	4771. 438.	4091. 439.	2508. 449.	1.172. 416.	584.	
•	PK IT EN								'SEC XER	R
	2 2 56: 3 1 60;		607. 815. 665. 1 705	9035. .2222.		1118. 19 1128. 11 1205. 37 1277. 54	1107 1197	35 2.81.0 35 9.397 19 5.444	°E 02 0.1	
_	5 1. 64!	5.67 1	300. 987. 648.	6546.		1277. 04 1291. 54 1314. 01	1285		2E 00 6.2	

1.82

1330.65 1326 11 1.578E 00 11.0

91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224R

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6018.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1.

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:+:

\*:

ACQUISITION DATE: 11JAN80 1957:59 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER: 15.0%

ELAPSFD LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GFLI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* EMERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALE LIFE RATIO: 8.00 OFFSET: −0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

\*

### UNKNOWN SAMPLE REPORT

1

1

645. 79

657.00

665.39

356.

170.

2473.

507.

514.

402.

ELEMENT	PEAK ENERGY	BKGME	)	AREA	CONCEN		1 SIGMA ERROR	ZERROR
%-COPPER	510.5	2258		638.		27	0. 0014	
%-ANTIMONY %-ARSENIC	564. 0 657. 0			2522. 2473.	0. 726 0. 191	=	0. 0028 0. 0064	0. 4 3. 3
1009: 17		1.43.	145.	138.	1.65.	152.	136.	183.
1018: 16:	L. 191.	231.	256.	262.	238.	208.	178.	160.
1027: 15	i. 163.	159.	156.	145.	160.	122.	153.	132.
1117: 4169	9. 595 <u>0</u> .	5824.	3663.	1523.	543.	484.	1.034.	2824.
1126: 7477	<sup>7</sup> . 14680.	20298. 1	L9829.	11822.	4265.	851.	1.74.	83.
1135: 69	9. 62.	62.	56.	66.	73.	85.		87.
<b>1</b> 301: 3:	š. 29.	38.	29.	33.	34.	37.	37.	42.
1310: 6		270.				345.		
1319: 3				33.			27.	37.
	PULSE-PIL					.IOM =		
PK IT EN	ERGY AR	CEA PI	(GND	FWHM	CHANNEL	LEFT F	PW CTS/	'SEC ZERF
1 1 51	a. 47 - 6	338. 2	2258.	2. 93	1021. 34	1013	15 1.064	E 00 11.2
	9.02 237	'18.	898.	1.85	1118.38	1107	35 3.953	
2 2 55: 3 2 56:	3.99 825		757.		1128.30	1107	35 1. 375	E 02 0.4
4 1 60;	2. 65       49		861.	1. 91	1205.57		21 8.205	
5 1 63	3. 82	83.	528.	2. 25	1277.86	1274	11 1.388	E-01 40.5

1.91

1.86

2.13

1291.78 1286

1314.18 1305

1330.96 1326

12 5, 932E-01 10, 4

11 2.836E-01 18.3

2.4

17 4.122E 00

🕨 91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224S

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7364.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 11JAN80 2008:25 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: . 5.000
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

**\*** 

DETECTOR: GEL1-8 \* LIBRARY: NUCL. L1B1

:+:

\*

ZERROR	1. SIGMA ERROR	-	CONCEN	HREA	D A	BKGI	PEAK EWERGY	<b>.</b>	ELEMENT
8. 4 0. 3 3. 2	0.0015 0.0028 0.0065	Ø	0. 017 0. 819 0. 206	 1073. 3594. 3255.	4. 113	34; 11:	510. 7 564. 0 657. 0	10NY	Z-COPPE Z-ANTIN Z-ARSEN
239. 226. 210.	205. 251. 1.87.	202. 291. 173.	221. 347. 192.	205. 337. 188.	185. 309. 206.	184. 298. 187.	209. 232. 215.	223. 264. 1.96.	1009: 1018: 1027:
3964. 131. 103.	1377. 253. 1.09.	659. 1223. 94.	801. 5664. 98.	2018. 1.6170. 1.03.	5032. 27034. 1.07.	8038. 28098. 102.	8252. 20392. 113.		1117: 1126:: 1135:
60. 71. 57.	55. 198. 42. 1. 000	63. 461. 41.	45. 767. 35. CORRECT	43. 813. 57. DATA.	49. 681. 53.	59. 367. 49.	53. 155. 48. ULSE—PII	59. 96. 55.	1301: 1310: 1319:

PΚ	1. 1	EMERGY	HREH	BKGMD	FMHM	CHEINNEL	LEFT	РМ	CTS/SEC	%ERR
1	1	510, 71	1073.	3429.	3. 62	1021.83	1012	18	1.789E 00	8. 3
2		559. 02	32557.	1404.	1 85	1118.37	1108	35	5. 426E 01	0.6
 3	2	563. 98	113594.	1134.	1.85	1128. 29	1.108	35	1.893E 02	0. B
4	1.	602. <i>6</i> 5	7043.	1080.	1.88	1205.56	1196	17	1.174E 01	1.4
5	1	645. 73	499.	868.	2.19	1291 66	1.285	16	8. 309E-01	9. 5
 6	:1.	656. 98	3255.	840.	1. 91	1314. 16	1305	20	5. 425E 00	2.2
7	1	665. 15	268.	443.	2. 37	1330, 47	1325	1.1	4. 459E-01.	12. 7

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: 0224T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5340.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:†:

:4:

ACQUISITION DATE: 11JAN80 2019:00 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
'ELAPSED REAL TIME: 697. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIBA

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: −0.5932283 KEV · \* ABUNDANCE LIMIT: 85.00%

:4:

\*

ELEMENT	PEAK EMERGY	8KGI	ND F	IREA	CONCE	√1 K.	1 SIGMA ERROR	%ER	ROR
%-COPPER • %-ANTIMONY	51.1 . 0 563. 9	134. 74.	46. 47. 501	0. < .925.	9. 01.3 5. 000	:4 15	NOT DET 0.01.05	ECTABL	E 0 2
● %-ANTIMONY %-ARSENIC	656. 9	53	81. 15	5100.	1.336	92	0. 0338		2. 5
1009: 1107.	1092.	1184.	1028.	998.	1031.	966.	1060.	1025.	
1018: 1064.	966.	1049.	1064.	1091.	1025.	1.045.	1027.	1070.	
1027: 979.									
1117:27372.	36580.	34406.	21090.	8965.	3892.	3949.	7936.	20917.	
_ 1126:51935.									
1135: 1406.									
1301: 342.	353.	376.	410.	399.	393.	345.	413.	422	
1310: 610.	1071.	1952.	3297.	4141.	3545.	2154	1962	462.	
1319: 380.	363.	333.	364.	353.	348.	322	335.	380.	
	ULSE-PIL	E-UP C	ORRECTED	DATA.	CORRECT	10N =	1 000	***************************************	
PK IT ENER	SGY AR	EA I	PKGND	FЫНМ	CHANNEL	LEFT F	ры стя	/SEC	%ERR
<ul><li>1 2 558.</li></ul>	96 1463	24.	7659.	1. 91	1118. 26	1107	35 2. 439	9E 02	0. I
2 2 563.	92 5019	25.	7447.	1. 89	1128. 16	1107	35 8.369	5E 02	0. 1.
2 2 563. 3 1 602. • 4 1 645.	59 297				1205. 45		18 4.963		0.7
4 1 645.	66 15				1291.53		1.5 2.580		7.6
5 1 656.	94 151 14 9	00.	5381.		1314.07	1307	15 2. 51.7		1. 1
6 1 665.	14 9	23.	3795	1 94	1339, 45	1325	11 1 538	9E 00 1	а а

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11377.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF.TAB1

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:+:

ACQUISITION DATE: 11JAN80 2030:49 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

:4:

:4:

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*

UNKNOWN SAMPLE REPORT

•	ELEMENT		PEAK ENERGY	EKG	MD	AREA	CONCE		1 SIGMA ERROR	%ERROR
•	X-COPPE X-ANTIM X-ARSEN	ühlt	564. Ø	46. 1.0 5.	57. 16	7390. 0738. ` 0. <	Ø. 75	99 31 48	0. 0022	2. 1 Ø. 3 ECTABLE
•	1009: 1018: 1027:	245. 521. 387.	265. 724. 286.	227. 1030. 254.	1379.	254. 1516. 196.	1345.	276. 1101. 213.		366. 559. 191.
•		433. 4002. 136.	523. 28442. 123.	539. 40296. 110.		490. 23418. 106.	592. 8361. 104.		1773. 314. 81.	5343. 146. 98.
•		45. 33.	64. 38. 35. ULSE—P11	51. 56. 34. .E-UP C	41. 50. 43. ORRECTE	50. 61. 45. D DATA.	41. 64. 39. CORREC		39. 53. 31. 1. 000	38. 56. 31.
•	PK IT	ENER			BKGND		CHANNEL	LEFT F		'SEC ZERF

R 1 1 510.85 7390. 4631. 2.77 1022.11 1012 21 1.232E 01 1. 7 2 2 560, 27 1643. 1442. 2.12 1120.87 11.08 31 2.739E 00 4. 1 2 563.99 160738. 1057. 1.84 1128. 32 1108 31 2.679E 02 0.3 1 602.65 9159. 1109. 1.84 1205.58 1196 17 1. 527E 01 1.2 645.83 652. 837. 1.91 1291.86 1286 17 1. 086E 00

\*\*\*\*\*\*\* 14 JAN 1980 10:11:16 AM \*\*\*\*\*\*\* \*\*\*\*\* 

91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION:

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9345, 000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TABL

ACQUISITION DATE: 11JAN80 2041:23 \* FWHM(1332) 2.390 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 % ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. L181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2. 000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8. 99 OFFSET:

-0.5932283 KEV \* ABUNDANCE LIMIT: 85. 00% :4:

# UNKNOWN SAMPLE REPORT

•	ELEME	NT			EAK IERGY	BK6	iND		IREA	CONC	ENTR.		SIGMA ERROR		ROR
•	X-ANT	IM	OMY	E	64. 0	42 41 3	.69.	127	'964.	0. 0 0. 7 0. 0	313	i	0. 0024		0. I
•	1009 1018 1027	:	401.		695.	824.	105	5.	1133.	214 1133 167	. 87	6.	635.	395.	
•	1126	:1		22	392.	32183.	34.17	1	1.9021.	512 6797 62	. 134	1.		1.05.	
•	1301 131.0 131.9	١;	48. 26.		25. 35.	32. 25.	5 3	1. 9.	57. 28.	35 50 32 CORRE		2.	35. 38.	24. 37.	
•	PK I	7		4	•	REA				CHANNE					%ERR
•	2 3 4	1. 1. 1.		01 66 86	127: 7:	748. 964. 403. 458. 96.	4169 990	i. i.		1022. 0 1128. 3 1205. 6 1291. 9 1314. 6	4 1120 0 1194 2 1286	) 1   2   1	4 9. 58: 7 2. 13: 2 1. 23: 4 7. 64: 0 1. 59	3E 02 4E 01 0E-01	2. 1 Ø. 3 1. 3 8. 5 28. 8

🕨 9111.9065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11.253.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: FFF. TAB1

:†:

ACQUISITION DATE: 11JAN80 2051:54 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*

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:4:

DETECTOR: GELI-8 \* L1BRARY: NUCL. L1B1

:4:

ELEMENT	PEAK ENERGY	BKGN	D f	HREA	CONCE		1 SIGMA ERROR	ZER	ROR
%-COPPER %-ANTIMONY %-ARSENIC	564. 0	1.08	2. 143	3267.	0. 681	.2			0. Z
	. 710.	999.		1.414.		1012.	288. 785. 164.	493.	
		35753.	34656.	21024.	7305.	1605.		123.	
1310: 36 1319: 29	. 49. . 44. . 51. PULSE—PIL	44. 38.	53. 34.	49. 32.	60. 28.	45. 39.	42. 34.	49.	
PK IT ENE			KGND		CHRWNEL			SEC	%ERR
1 1 510 2 2 560 3 2 564 4 1 602	.07 13 .00 1432		1433. 1082.	2. 1.1	1022. 11 1120. 48 1128. 33 1205. 62	11.09 1109	26 1.156 45 2.319 45 2.388 24 1.444	E 00 E 02	1. 9 4. 7 0. 3 1. 2
5 1. 645		23.	688.	2. 05	1291. 78		16 1.039		7. 2

🕽 91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S604D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10231.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

+:

ACQUISITION DATE: 11JAN80 2102:28 \* FWHM(1332) 2.390
PRESFT TIME(11VE): 600. SEC \* SENSITIVITY: 5.000
PELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR 1TERATIONS: 10.

:4:

:+:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

:4:

ELEME	ЧТ 	PEAK ENERG	/ BKG	iND	AREA	CONCE		1 SIGMA ERROR	%E.F	RROR
● %-AMT	TMONY	564. 1	73 73 7 30 7 18	127. 35	3887.		13	MOT DET 0.0043 0.0042		0.2
1009 1018 1027	: 572.	555		645.	613.	542. 613. 485.	630.		539.	
_ 1126	:32829.	63905	87632.	82772.	50271.	1681. 17930. 349.	4214.	1007.	12477. 640. 340.	
	: 154. : 118.	218 149	. 128.	536. 122.	657. 135.	135. 582. 134. CORREC	406. 160.	224. 111.		
PK I	T EMER	RGY	AREA	BKGND	FЫНМ	CHANNEL	LEFT F	W CTS	/SEC	%ERR
2 3	2 559. 2 563. 1 602. 1 645.	97 35 64 2	4276. 3887. 0757.	3027. 4085.	2. 1.4 1. 87 1. 85	1128. 27 1205. 54	11.07 1195	35 4.046 35 5.896 19 3.456	8E 02 9E 01	0. 7 0. 2 0. 8
	2. 645. 1. 656.		1432. 2094.		2. 11 1. 89	1291. 61 1314. 14		15 2. 38° 14 3. 49°		5. 4 3. 6

🕨 91119065 QY,RF 🛮 FIFTH IRRADIATION PART TWO

SAMPLE DATF: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S604E

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7303.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR EFFICIENCY FILE NAME: EFF. TAB1

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**:** 

ACQUISITION DATE: 11JAN80 2113:34 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 635. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC: \* NBR ITERATIONS: 10.

:4:

**\*** 

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

ELEMEMT.		PEAK ENERGY	BKG	ND 	AREA	CONCE		1 SIGMA FRROR	%EF	ROR
%-correr						. e. 005	57	NOT DET	ECTABL	_E
N−ANTIMC N−ARSENI							94 85			
1009:	364.	356.	377.	363.	387.	378.	346.	349.	346.	
1018:	346.	397.	385.	403.	409.	419.	397.	357.	328:	r
1027:	349.	326.	323.	307.			325.	332.	321.	
<b>)</b> 1117: 2	2949.	4048.	4032.	2817.	1535.	1048.	1374.	2834.	8145.	
1126:21	313.	42439.	60055.	57179.	R4835.	12751.	2624.	557.	293.	
1135:			205.		206.		191.			
1301:	79.	85.	68.	88.	77.	73.	78.	82.	89.	
								1.55.		
								82.		
•						CORRECT				
PK IT	ENERG	i'Y AF	REA	BKGND	FWHM	CHANNEL	LEFT F	W CTS∕	SEC	ZERR
	559. 6	98 1.66	597.	2618.	2. 07	1118. 49	1108	34 2. 783	E 01	Ø. 9
2 2	563. 9		<sup>2</sup> 10.		1.85	1128.31	1108	34 4.012	E 02	0.2
	602. e		<sup>7</sup> 90.		1. 91	1205.58		18 2.465		0.9
4 1.	645. 8				1.89	1291. 94		17 1, 621		6. 4
5 1	657. 6	10 14		1232.	1 88	1314 19	1307	16 2 489	F ព្រ	4 2

● 91119065 QY.RF FIFTH 1RRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S604F

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6894.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1.

:4:

ACQUISITION DATE: 11JAN80 2124:20 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER: 15.0%

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GFL 1-8 \* LIBRARY: NUCL, LIB1

:**4**:

ELEMENT	PEAK ENERGY	BKGM	1[)	AREA 	CONCE	/TR.	1 SIGMA ERROR	%EF	ROR
%-COPPER • %-ANTIMONY %-ARSENIC	564. 0	1.98	8. 24	2090.	1.889	97	0. 0048		0. I
• 1009: 33; 1018: 354 1027: 365	7. 375. 4. 355.	369. 401	343. 379.	370. 410.	372. 391.	354. 370.	346. . 338.	371. 365.	
1117: 283; 1126:21610 1135: 269	3. 42949.	59936.	57433.	35310.	12894.	2698.	615.	299.	
1301: 70 1310: 10: 1319: 60	5. 136. 5. 84.	254. 73.	348. 89.	437. 66.	395. 75.	275. 88.	137. 59.	82. 70.	
PK IT EN									%ERR
2 2 56: 3 1 60:	2.66 14:	390. 361.	1988. 2274.	1 86 1. 83	1128. 31	1108	35 2.723 35 4.035 17 2.393	E 02	0. 9 0. 2 1. 0
4 1. 64 <sup>1</sup> 5 1. 65 <sup>1</sup>	5.80 10	361. 489.	1665.	2. 05	1291. 81 1314. 13		20 1.768 15 2.481		6. 2 4. 2

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8982.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 11JAN80 2135:06 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* L1BRARY: NUCL. L1B1

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLFRANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

:+:

\*

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-ANTIMONY	564. 0	663. 1.	19606.	0. 0703 0. 7179 0. 0051	0. 0024	Ø. 3
1009: 170, 1018: 329, 1027: 275,	493.	174. 165 678. 926 174. 150	. 974.	925. 765	4. 202. 5. 558. 5. 152.	387.
1117: 332 1126:10207 1135: 78	20626. 29	989. 29124	. 1.7542.	417. 620 6417. 1324 62. 59		79.
1319: 17	24. 27.	35. 43 28. 28	. 38. . 26.	22. 33 30. 31 39. 22 CORRECTION =	3. 37. 2. 17.	29. 27. 22.
PK IT EME		BKGND		CHANNEL LEFT		SEC XERR
1 1 510 2 2 560 3 2 564 4 1 602 5 1 645	.15 1237 .01 119606 .66 4081	. 663. . 574.	2. 12 1. 83	1022, 17 1012 1120, 62 1108 1128, 35 1108 1205, 58 1197 1291, 82 1284	22 8.079 29 2.062 29 1.993 17 6.802 14 4.269	E 00 4.5 E 02 0.3

🕽 91119065 QY,RF FIFTH 1RRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626K

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7574.000 UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

\*

:4:

:4:

:4:

ACQUISITION DATE: 11JAN80 2145:36 \* FWHM(1332) 2.390
PRESET TIME(L1VE): 600. SEC \* SENSITIVITY: 5.000
ELAPSED REAL TIME: 613. SEC \* SHAPF PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* MBR ITERATIONS: 10.

DETFCTOR: GEL1-8 \* L1BRARY: NUCL. L.181

DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

## UNKNOWN SAMPLE REPORT

1

645, 80

ELEMENT	PEAK FNERGY	BKGND	AREA	COMCENTR.	1 SIGMA ERROK	%ERROR
%-COPPER ● %-ANTIMONY %-ARSENIC	564. Ø	681. 10	12086.	0. 0759 0. 7280 0. 0057	0. 8026	Ø. 4
	123. 1 447. 5 161. 1			846. 689	5. 188. 9. 462. 2. 113.	305.
1117: 237. 1126: 8699. 1135: 55.	17579. 254	46. 24919.	151.46.	366. 533 5321. 109: 37. 54	L. 162.	79.
1349: 23.	28. 23.	28. 37. 28. 14.	26. 21.	32. 24	i. 20.	22.
PK IT EMER				CHANNEL LEFT		SEC ZERR
<ul><li>1 1 510.</li><li>2 2 560.</li><li>3 2 564.</li><li>4 1 602.</li></ul>	21 994. 01 102086.	2833. 994. 681. 938.	2. 11 1. 83	1022. 16 1012 1120. 76 1111 1128. 35 1111 1205. 60 1198	31 1.657	E 00 5.5 E 02 0.3

1.. 86

1291.81 1284

15 4.017E-01 13.2

383.

241.

🕽 91119065 QY,RF - FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00 SAMPLE IDENTIFICATION: S626L

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9076.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR EFFICIENCY FILE NAME: EFF. TAB1

:+:

ACQUISITION DATE: 11JAN80 2156:02 \* FWHM(1332) 2.390
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000
PRESET TIME(LIVE): 616. SEC \* SHAPE PARAMETER: 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

...

:1:

DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1

:†:

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
● %-ANTIMONY	510. 8 564. 0 657. 4	4137. 11	5125. 8764. 0. <		0. 0024	Ø. 3
1009: 155 1018: 382 1027: 261	. 516. 7	70. 170. 63. 942. 30. 155.	173. 974. 148.	940. 774	5. 227. 4. 568. 5. 122.	381.
	. 349. 3 . 21178. 297 . 60.	98. 28897.	17550.		9. 199.	105.
<b>1</b> 31.0: 24 1319: 25	. 13.	29. 32. 31. 22.	37. 28.	31. 34 42. 40 27. 2: CORRECTION :	L. 26.	18. 24. 22.
PK IT ENE		BKGND		CHANNEL LEFT		SEC ZERR
1 1 510 2 1 564 3 1 602 4 1 645	.00 118764. .67 4358.	4984. 4137. 567. 376.	1. 82 1. 87	1022.06 1011 1128.34 1120 1205.62 1196 1291.89 1286	32 8.542 19 1.979 18 7.264 16 5.687	E 02 0.3 E 00 1.7